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IMRIE, John H., . . .	Edinburgh.
Irving, William P., . . .	Yorkshire.
Irwin, Valentine, . . .	Ireland.

JACKSON, Arthur G., . . .	Bristol.
James, Robert B., . . .	Yorkshire.
James, Sydney, . . .	Cardiff.
Jarvis, Louis D., . . .	London.
Johnstone, Edward, . . .	Manchester.
Jones, James E., . . .	Manchester.
Jones, John Whitley, . . .	Yorkshire.
Jones, Owen Dan, . . .	Edinburgh.
Jones, Walter E., . . .	Manchester.

KEEBLE, Charles, . . .	London.
Kellar, Walter D., . . .	Bristol.
Kelly, John E., . . .	Ireland.
Kelly, Robert F., . . .	London.
Kennedy, Alfred W., . . .	Dundee.
Kennedy, Bryan C. M., . . .	Belfast.
Keown, Thomas H., . . .	Belfast.
Kerr, Andrew M., . . .	Belfast.
Kerr, George W. B., . . .	Dundee.
Kestin, Leslie Charles, . . .	London.
Keysell, Thomas E., . . .	London.
Kinloch, James, . . .	Dundee.
Kinnear, Walter S., . . .	Ireland.
Kirby, George E., . . .	Norwich.
Kirkness, James W., . . .	Liverpool.
Kirkwood, Charles R. B., . . .	Glasgow.
Kubler, William G., . . .	London.

LAIDLAW, David L., . . .	Glasgow.
Laidlaw, J. Hunter, . . .	Glasgow.
Laird, John, . . .	Glasgow.
Lambert, Charles W., . . .	Manchester.
Lambert, George L., . . .	London.
Land, John, . . .	Manchester.

<i>Name.</i>	<i>Institute.</i>
Lane, H. Langridge, . . .	Bristol.
Lane, J. H. E., . . .	London.
Large, John, . . .	Norwich.
Latta, Alexander, . . .	Birmingham.
Lawrie, Stewart, . . .	Glasgow.
Leach, Arthur S., . . .	Liverpool.
Learmont, James, . . .	Edinburgh.
Leggatt, Herbert T. Owen, . . .	London.
Leonard, Albert J. D., . . .	Brighton.
Leslie, John, . . .	Dundee.
Leslie, Robert P., . . .	Birmingham.
Letcher, Harold B., . . .	Belfast.
Levine, Abraham, . . .	London.
Lewis, A., . . .	{ Newcastle- on-Tyne.
Lewis, Arthur John, . . .	Birmingham.
Lewis, Herbert, . . .	London.
Lewis, Hugh, . . .	London.
Lewis, Robert, . . .	London.
Liddell, John R., . . .	{ Newcastle- on-Tyne.
Linley, David M., . . .	London.
Little, John Robert, . . .	Edinburgh.
Littlewood, John Elliot, . . .	Nottingham.
Lloyd, W. Evan, . . .	Cardiff.
Lockwood, Henry J., . . .	London.
Lodge, Alexander J., . . .	{ North Staf- fordshire.
Logan, James, . . .	{ Newcastle- on-Tyne.
Lord, Sir Riley, . . .	{ Newcastle- on-Tyne.
Loudon, John, . . .	Manchester.
Love, Robert, . . .	London.
Low, Henry M., . . .	London.
Lowe, William B., . . .	Belfast.
Lyddon, H. Nelson, . . .	Bristol.

MACCALLUM, Peter C., . . .	London.
M'Causland, George Henry, . . .	London.
M'Connell, James, . . .	Belfast.
M'Connell, William A., . . .	Ireland.
M'Culloch, John, . . .	Glasgow.
Macdermott, Alexander, . . .	Liverpool.
Macdermott, William H., . . .	Nottingham.
M'Gillivray, Charles E., . . .	Glasgow.



<i>Name.</i>	<i>Institute.</i>	<i>Name.</i>	<i>Institute.</i>
Macgregor, Alexander, .	Ireland.	Mumford, William J., .	Birmingham.
M'Kay, Robert, . . .	Aberdeen.	Munday, David M., . .	London.
Mackay, William Aeneas, .	London.		
M'Kean, George A., . .	Sheffield.		
M'Keand, Frank A., . .	Bristol.		
Mackenzie, Robert K., .	Liverpool.	NAISMITH, William W., .	Glasgow.
Mackinnon, John, . . .	Liverpool.	Neish, William G., . .	{ Newcastle- on-Tyne.
M'Laren, Norman, . . .	London.	Newlands, Edward F., .	Edinburgh.
M'Lean, James W. L., . .	Liverpool.	Newlands, George, . .	Aberdeen.
MacLennan, Donald Wylde, .	London.	Newman, V. Chester, . .	London.
MacLennan, James John, .	Glasgow.	Newton, Samuel H., . .	Nottingham.
Macneil, Patrick, . . .	Glasgow.	Nichols, George H., . .	Manchester.
M'Neill, James Henry, . .	Glasgow.	Nicholson, Herbert P., .	London.
Macniven, Archibald, . .	Manchester.	Nicol, William S., . . .	Glasgow.
MacPherson, David R., . .	London.	Nicoll, James G., . . .	London.
Macready, William R., . .	London.	Nolan, Thomas M. A., .	Ireland.
Maltby, Henry, . . . .	London.	Norie-Miller, Francis, .	Perth.
Mann, Henry, . . . . .	London.	Norman, Herbert, . . .	Birmingham.
Marsden, John W., . . .	Liverpool.	Noverre, Charles E., . .	London.
Marsland, Robert W., . .	London.	Nuttall, Leonard, . . .	Manchester.
Martindale, George E., . .	Liverpool.		
Maryan, William N. H., . .	Birmingham.		
Maudsley, William T., . .	London.		
Maxwell, D. Aubrey, . . .	Glasgow.	OGDEN, Herman, . . . .	Manchester.
May, Henry John, . . . .	London.	Ogilvie, J. Gordon, . . .	{ Newcastle- on-Tyne.
Maybury, Edwin, . . . .	London.	Ogilvie, Robert A., . . .	London.
Mead, George E., . . . .	London.	Ogilvie, W., . . . . .	{ Newcastle- on-Tyne.
Meanock, Herbert, . . . .	Cardiff.	Oldham, Charles, . . . .	London.
Melrose, David, . . . . .	Glasgow.	O'Reilly, Bernard H., . .	Ireland.
Milburn, Edwin W., . . .	Sheffield.	Ostler, James, . . . . .	Manchester.
Mills, Frederic W., . . .	Liverpool.	O'Sullivan, Peter J., . . .	Ireland.
Mills, George T., . . . .	London.	Owen, E. Roger, . . . . .	London.
Minnion, Ernest Harry, . .	London.	Owen, J. Lloyd, . . . . .	London.
Minnis, David John, . . .	Ireland.	Owen, Maurice L., . . . .	Birmingham.
Mitchell, H. Beaufort, . .	London.	Owen, O. Morgan, . . . .	London.
Moffat, Arthur, . . . . .	Glasgow.		
Mole, William C., . . . .	Cardiff.		
Molyneux, Frederic S., . .	Nottingham.		
Moon, James, . . . . .	Liverpool.		
Moore, Frederick James, . .	{ Newcastle- on-Tyne.		
Moore, Richard M., . . . .	Ireland.		
Moorhouse, Alfred, . . . .	Yorkshire.		
Morant, George C., . . . .	London.	PALMER, Sydney H., . . .	Brighton.
Morant, G. M'Kay, . . . .	London.	Panton, Frederic W., . . .	{ Newcastle- on-Tyne.
Morrison, John, . . . . .	London.	Parry, E. Morant H., . . .	Cardiff.
Muir, James W., . . . . .	Dundee.	Pasfield, Sidney G., . . .	London.
Mulhall, James A., . . . .	Ireland.		

<i>Name.</i>	<i>Institute.</i>	<i>Name.</i>	<i>Institute.</i>
Paterson, John, . . .	Liverpool.	Reddrop, Frederick, . . .	London.
Patrick, Alfred E., . . .	Birmingham.	Redfarn, James J., . . .	Liverpool.
Paulden, Frank, . . .	Manchester.	Reed, Robert Laing, . . .	{ Newcastle- on-Tyne.
Paulin, Sir David, . . .	Edinburgh.	Relton, Arthur J., . . .	London.
Peacock, Colin, . . .	{ Newcastle- on-Tyne.	Renison, William J. H., . . .	Liverpool.
Peat, Robert B., . . .	Ireland.	Reynolds, George William, . . .	London.
Peate, John M., . . .	Ireland.	Richardson, William, . . .	Edinburgh.
Penn, Andrew, . . .	Glasgow.	Richardson, William, . . .	Liverpool.
Peregrine, Charles, . . .	Manchester.	Rickwood, Frederick H., . . .	London.
Perkins, James E., . . .	Liverpool.	Riddel, William Hewat, . . .	Bristol.
Perry, William T., . . .	London.	Ridley, Percy E., . . .	London.
Phillips, Charles W. S., . . .	London.	Ridoutt, Alfred E., . . .	London.
Phillips, John, . . .	Cardiff.	Riley, Thomas S., . . .	Yorkshire.
Pim, R. Barclay, . . .	Belfast.	Riley, William H., . . .	Yorkshire.
Pipkin, Samuel J., . . .	London.	Rimmer, John C., . . .	Liverpool.
Pitcher, W. Fred., . . .	Cardiff.	Riseley, Henry L., . . .	Bristol.
Plenderleith, Mungo, . . .	Glasgow.	Ritchie, Frank B., . . .	London.
Plummer, Norman C., . . .	Cardiff.	Roberts, Arthur O., . . .	Liverpool.
Pollard, James A., . . .	London.	Roberts, William, . . .	Liverpool.
Pollit, Henry J., . . .	Liverpool.	Robertson, Alexander D., . . .	Liverpool.
Ponsonby, Theobald B., . . .	London.	Robertson, Archibald, . . .	Liverpool.
Pope, John R., . . .	Birmingham.	Robertson, John, . . .	Aberdeen.
Pope, William A., . . .	Manchester.	Robertson, Thomas W., . . .	Dundee.
Potter, Arthur, . . .	Yorkshire.	Robertson, William A., . . .	Edinburgh.
Potterton, W. M., . . .	Belfast.	Roddick, Robert M. M., . . .	Edinburgh.
Powell, Joseph, . . .	London.	Rodger, Adam Keir, . . .	Glasgow.
Preston, Frank E., . . .	Bristol.	Rodgers, Alfred, . . .	Manchester.
Pringle, James, . . .	{ Newcastle- on-Tyne.	Rollason, Joseph G. W., . . .	Birmingham.
Pringle, William, . . .	Dundee.	Rooney, Joseph A., . . .	London.
Proctor, Joseph S., . . .	Glasgow.	Roy, Richard, . . .	Dundee.
Pugh, Llewelyn L., . . .	Cardiff.	Rutherford, Frederick W., . . .	London.
		Rutter, Frederick W. P., . . .	Liverpool.
QUEEN, Arthur John, . . .	Liverpool.	SARE, Thomas H., . . .	London.
RADCLIFFE, Hubert S., . . .	Bristol.	Saunders, Henry C., . . .	Birmingham.
Rae, Archibald F., . . .	Aberdeen.	Saunderson, Herbert W., . . .	Nottingham.
Randall, Charles E., . . .	London.	Savile, Charles C., . . .	Bristol.
Rankin, William C., . . .	Glasgow.	Scott, Francis C., . . .	Manchester.
Rann, Arthur R., . . .	Birmingham.	Scott, James M., . . .	Belfast.
Ray, Henry, . . .	Manchester.	Scott, William James, . . .	Edinburgh.
		Searls, Walter James, . . .	London.
		Self, Ernest, . . .	Yorkshire.
		Sellers, James M., . . .	London.
		Shannon, Denis Albert, . . .	Ireland.

<i>Name.</i>	<i>Institute.</i>	<i>Name.</i>	<i>Institute.</i>
Shaw, W. Macintyre, .	Glasgow.	Tapscott, Henry J., .	Birmingham.
Shorter, George D., .	London.	Tavener, Frank J. L., .	Cardiff.
Shutt, C., . . . .	{ Newcastle- on-Tyne.	Taylor, Clement F., .	Cardiff.
Simmons, Hamilton W.,	London.	Taylor, George E., .	Belfast.
Simmons, Lewis H., .	Birmingham.	Taylor, Harold, . . .	Nottingham.
Simpson, George S., .	Glasgow.	Taylor, Hugh S., . .	Liverpool.
Sinton, William, . .	Liverpool.	Taylor, Robert, . . .	Yorkshire.
Skeggs, Alfred, . . .	London.	Taylor, Robert E., .	Glasgow.
Sketch, Ralph Y., . .	London.	Tebbutt, Lewis B., .	{ Northampton and Bedford.
Slagg, William C., . .	London.	Thobaven, John, . . .	Dundee.
Smith, D. H. Gordon, .	Yorkshire.	Thomas, Ernest H., .	Manchester.
Smith, John, Jr., . .	Cardiff.	Thomas, Harold A., .	Nottingham.
Smith, Philip J., . .	Bristol.	Thomas, Richard E., .	Cardiff.
Smith, R. Gordon, . .	Glasgow.	Thompson, Charles, .	London.
Smith, Sidney Thomas,	London.	Thompson, E. Stuart, .	London.
Smith, Walter A., . .	Edinburgh.	Thompson, Robert W.,	Liverpool.
Sneezum, Henry T., . .	London.	Thomson, Alexander Gibbon,	Perth.
Snushall, Alfred J. H.,	Birmingham.	Thomson, Robert Tickell, .	London.
Southam, Herbert E., .	London.	Thoresby, Frederick, .	London.
Sparrow, George F., . .	Ireland.	Thorpe, Windsor, . .	Yorkshire.
Speers, John, . . . .	Manchester.	Tombazis, John A., .	Dundee.
Spence, J. Fleming D.,	Manchester.	Tooke, Arthur F., . .	Bristol.
Spence, Philemon C., .	Liverpool.	Torrance, R., . . . .	Ireland.
Stables, William, . .	Aberdeen.	Torrens, David, . . .	London.
Stanier, Percy A., . .	Yorkshire.	Towers, Walter, . . .	Nottingham.
Stanley, Frank L., . .	Ireland.	Towle, Louis J., . . .	Nottingham.
Starkey, William H., .	Liverpool.	Toyne, Bertie C., . .	London.
Stenhouse, George C., .	Edinburgh.	Tregaskis, George, . .	{ North Staf- fordshire.
Stevenson, Henry J., .	Edinburgh.	Trenam, Cecil, . . . .	Manchester.
Stewart, Charles N., .	Glasgow.	Tripe, Harry, . . . .	London.
Stewart, James W., . .	Glasgow.	Truzzell, Harry, . . .	Nottingham.
Stirling, James, . . .	London.	Turnbull, Walter H., .	Birmingham.
Stirling, Robert, . . .	London.	Turner, Harold E., . .	Nottingham.
Stock, Percy, . . . .	Yorkshire.	Turner, Herbert F., . .	London.
Sugden, John D., . . .	Manchester.	Turner, Sydney C., . .	London.
Sutherland, William, .	Edinburgh.		
Suttie, Thomas E., . .	Dundee.		
Sutton, W. Bertram L.,	London.		
Swanson, John, . . . .	London.		
Sweet, Alfred G., . . .	London.		
Sykes, Eustace, . . . .	Liverpool.		
Symington, Colin, . .	Edinburgh.		

TAIT, John J., . . . . London.  
Tapp, William Pearce, . Bristol.

URQUHART, Peter J., . . Edinburgh.  
WALKER, David C., . . Manchester.  
Walker, Davidson, . . . Norwich.

<i>Name.</i>	<i>Institute.</i>	<i>Name.</i>	<i>Institute.</i>
Walker, Norman M., . . .	London.	Williams, W. Henry, . . .	Manchester.
Walton, Richard, . . .	Liverpool.	Williamson, Edward F., . . .	Birmingham.
Wamsley, Arthur W., . . .	London.	Williamson, James, . . .	Belfast.
Wansbrough, Thomas P., . . .	London.	Wills, Grahame H., . . .	Bristol.
Ward, James T., . . .	Belfast.	Willson, J. Harcourt, . . .	Manchester.
Ward, William Henry P., . . .	London.	Wilson, Henry E., . . .	London.
Warden, Gilbert F., . . .	Manchester.	Wilson, John R., . . .	Dundee.
Wardman, George, . . .	Manchester.	Winn, Arthur R., . . .	Birmingham.
Warner, Harold, . . .	Birmingham.	Wisely, William M., . . .	Glasgow.
Warner, James R., . . .	Ireland.	Wood, Percy G., . . .	Yorkshire.
Waterstone, James S., . . .	{ Newcastle- on-Tyne.	Woodhill, Willam W., . . .	Bristol.
Watson, James Douglas, . . .	London.	Worley, Arthur, . . .	London.
Watson, Leslie T., . . .	Yorkshire.	Wormleighton, Edwin A., . . .	{ Northampton and Bedford.
Watson, William, . . .	{ Newcastle- on-Tyne.	Wride, H. Mason, . . .	Cardiff.
Waugh, David, . . .	Edinburgh.	Wyatt, Henry, . . .	Liverpool.
Webb, William, . . .	Yorkshire.		
White, Arthur E. C., . . .	London.	YARROW, Herbert E. C., . . .	London.
White, Frederick, . . .	London.	Yeo, Alfred W., . . .	London.
White, Wilfred W., . . .	London.	Young, Frederick J., . . .	Bristol.
Whymper, William N., . . .	London.	Young, Harry James, . . .	Birmingham.
Williams, Ernest G., . . .	{ North Staf- fordshire.	Yule, David M. D., . . .	Edinburgh.
Williams, M. Trevor, . . .	Ireland.		

## LIST OF ASSOCIATES.

<i>Name.</i>	<i>Institute.</i>	<i>Name.</i>	<i>Institute.</i>
ADAM, James B., . . .	Edinburgh.	Blackmore, P. Barry, . . .	Cardiff.
Akeroyd, Fred., . . .	London.	Blackstock, William Witt, . . .	Manchester.
Allen, Donald C., . . .	{ Newcastle- on-Tyne.	Blandford, Charles R., . . .	Bristol.
Armstrong, Robert P., . . .	Birmingham.	Bonner, Thomas, . . .	Bristol.
		Bowdon, Frank E., . . .	London.
		Brady, John G., . . .	Glasgow.
		Brodbelt, Thomas W. B., . . .	Liverpool.
BACKHOUSE, Arthur L., . . .	Cardiff.	Brown, John A., . . .	{ Newcastle- on-Tyne.
Bagnall, Harold H., . . .	Manchester.	Buchanan, Frederick K., . . .	Glasgow.
Bain, Ebenezer, . . .	Belfast.	Burrow, George Wyon, . . .	Bristol.
Balston, Harry A., . . .	London.	Buttery, Harry R., . . .	London.
Barker, Frederick Wm. E., . . .	Manchester.		
Barker, Samuel, . . .	Manchester.	CARMICHAEL, Donald, . . .	Cardiff.
Barnfield, George, . . .	Birmingham.	Carpenter, Gilbert, . . .	London.
Binney, Godfrey William, . . .	{ Newcastle- on-Tyne.		





<i>Name.</i>	<i>Institute.</i>	<i>Name.</i>	<i>Institute.</i>
JENNINGS, Harry, . . .	Birmingham.	OATES, Francis E., . . .	Yorkshire.
Johnson, Thomas H., . . .	Manchester.	O'Neill, Harold E., . . .	Liverpool.
Jones, Ceredig, . . .	Liverpool.		
Jones, Thomas L., . . .	Liverpool.		
Jones, Vivian Emlyn, . . .	Cardiff.		
KEPPLE, Reginald H. J., . . .	Bristol.	PATTISON, George A. J., . . .	Ireland.
Knight, William H., . . .	Birmingham.	Paterson, John B., . . .	Birmingham.
		Penney, William, . . .	Manchester.
		Percy, Horace, . . .	Liverpool.
		Perowne, Frank R., . . .	Birmingham.
		Pindar, John H., . . .	Sheffield.
		Plowright, Sydney Geo. F., . . .	Birmingham.
		Potter, George, . . .	Yorkshire.
		Price, Walter A., . . .	Birmingham.
		Progin, Robert, . . .	Edinburgh.
LAING, Allan M., . . .	Liverpool.		
Laird, James, . . .	Edinburgh.		
Langley, Joseph W., . . .	{ Northampton and Bedford.	QUIN, Harold E., . . .	{ Newcastle- on-Tyne.
Leadsom, William H., . . .	Manchester.		
Lindsay, Matthew, . . .	Glasgow.		
M'DONALD, John, . . .	Edinburgh.	RAE, Reginald Wilson, . . .	London.
Macgregor, Llewellyn, . . .	Glasgow.	Rawcliffe, Harry, . . .	Belfast.
MacGregor, Robert, . . .	Glasgow.	Robertson, Stuart, . . .	Glasgow.
MacInnes, William, . . .	Glasgow.	Robertson, Wm. Binny, . . .	Dundee.
M'Michael, David H., . . .	Nottingham.	Rowntree, Herbert, . . .	Sheffield.
M'Nab, William R., . . .	Ireland.		
M'Robert, James H., . . .	Edinburgh.		
Marquis, Arthur, . . .	Dundee.		
Marshall, George F., . . .	Birmingham.		
Martin, George E., . . .	Yorkshire.		
Metcalf, T. Chapman, . . .	{ Newcastle- on-Tyne.	SCOTT, Charles C., . . .	Ireland.
Metcalf, Wm. Ernest, . . .	Yorkshire.	Scott, G. Ernest, . . .	Sheffield.
Miller, Edward, . . .	{ Newcastle- on-Tyne.	Scott, Matthew W., . . .	{ Newcastle- on-Tyne.
Morris, Edward O., . . .	Liverpool.	Shanks, Robert J., . . .	Glasgow.
Mountford, Ernest H., . . .	Birmingham.	Sherwood, Thomas B., . . .	Manchester.
Murphy, John W., . . .	Belfast.	Simmons, Henry B., . . .	Bristol.
		Smathers, Harry L., . . .	Liverpool.
		Smith, Harrison C., . . .	{ North Staf- fordshire.
		Smith, S. Arthur G., . . .	Manchester.
		Smith, Thomas, . . .	Liverpool.
		Stewart, Thomas, . . .	Edinburgh.
		Stewart, W. M. H., . . .	Belfast.
NORRIS, Henry C., . . .	Edinburgh.		

<i>Name.</i>	<i>Institute.</i>
Stove, James, . . .	Glasgow.
Sullivan, Herbert C., . .	Ireland.
Surmun, Henry, . . .	Liverpool.
Sutcliffe, Harold R., . .	Yorkshire.
Sutcliffe, William, . . .	Manchester.
Syder, Edward W., . . .	Liverpool.

TAYLOR, Edward Natuna, . .	Perth.
Thomas, Sydney Herbert, . .	London.
Thomson, James B., . . .	Liverpool.
Tyler, Stanley S., . . .	London.
Tyner, Walter B, . . .	Ireland.
Tyson, Stanley, . . .	Cardiff.

UNITT, A. Ernest, . . .	Sheffield.
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<i>Name.</i>	<i>Institute.</i>
VENELLI, Raphael P. M., . .	London.
WALLACE, Robert C., . . .	London.
Wands, Robert D., . . .	Liverpool.
Wardle, James K., . . .	Yorkshire.
Wardman, Robert, . . .	Manchester.
Waters, William N., . . .	Glasgow.
Wedgwood, Byron H., . . .	{ North Staf- fordshire.
Weeks, Reginald, . . .	Bristol.
Welch, Robert, . . .	Liverpool.
Wheeler, Edgar, . . .	London.
Whiteman, George H., . . .	London.
Williamson, Thomas C., . .	Glasgow.
Wilson, Thomas H., . . .	Yorkshire.
Wilson, Walter M., . . .	London.

## THE CHARTERED INSURANCE INSTITUTE.

*EXAMINERS, 1913.*

NAME.	TOWN.	Date of Election.	Branch.
J. Beckwith Bell, . . .	Liverpool, . . .	1907.	Accident.
J. A. Bewley, . . .	Liverpool, . . .	1907.	Fire.
W. Blair, . . .	Bristol, . . .	1905.	Fire.
C. J. Burne, . . .	Liverpool, . . .	1913.	Fire.
J. Headon Boocock, . . .	Birmingham, . . .	1898.	Fire.
D. M. Cameron, . . .	Edinburgh, . . .	1909.	Fire.
Pat. B. Carphin, . . .	Dublin, . . .	1913.	Fire.
J. H. Chapman, . . .	Manchester, . . .	1904.	Fire.
J. T. Clarke, . . .	Manchester, . . .	1910.	Fire.
J. N. Clymer, . . .	Manchester, . . .	1907.	Fire.
Stanley d'E. Colam, . . .	Edinburgh, . . .	1913.	Life.
G. Couper, . . .	Edinburgh, . . .	1913.	Accident.
A. H. Cowpe, . . .	Leeds, . . .	1905.	Fire.
J. H. Dixon, . . .	London, . . .	1913.	Fire.
H. Dougharty, . . .	London, . . .	1909.	Life.
J. P. Eddison, . . .	Leeds, . . .	1899.	Fire.
T. W. Essex, . . .	Birmingham, . . .	1908.	Fire.
A. E. Evans, . . .	Manchester, . . .	1910.	Fire.
Hugh C. Evans, . . .	Manchester, . . .	1909.	Fire.
W. R. Evison, . . .	London, . . .	1906.	Fire.
W. J. Fairclough, . . .	Liverpool, . . .	1913.	Life.
J. M. Fell, . . .	Manchester, . . .	1913.	Accident.
W. G. Fordyce, . . .	Liverpool, . . .	1910.	Accident.
J. W. Foster, . . .	Nottingham, . . .	1908.	Accident.
A. S. Fraser, . . .	Belfast, . . .	1903.	Fire.
H. Gayford, . . .	London, . . .	1907.	Fire.
J. Gibbs, . . .	Bristol, . . .	1913.	Fire.
F. S. Goggs, . . .	Edinburgh, . . .	1904.	Accident.
Stanley L. Goss, . . .	Liverpool, . . .	1913.	Accident.
John R. Gow, . . .	Glasgow, . . .	1911.	Accident.
G. Green, . . .	London, . . .	1913.	Life.
A. W. Gregory, . . .	Liverpool, . . .	1910.	Accident.
E. F. Grundy, . . .	London, . . .	1912.	Fire.
A. Guthrie, . . .	Glasgow, . . .	1905.	Fire.
Charles Guthrie, . . .	Glasgow, . . .	1909.	Life.
J. Mason Guttridge, . . .	Liverpool, . . .	1901.	Fire.
A. Stoughton Harris, . . .	Leeds, . . .	1909.	Life.
H. M. Healy, . . .	London, . . .	1906.	Fire.
W. Holbrook, . . .	Wallasey, . . .	1903.	Fire.
C. E. Howell, . . .	Dublin, . . .	1899.	Life.
J. H. Imrie, . . .	Edinburgh, . . .	1912.	Life.
E. V. Jeenes, . . .	Manchester, . . .	1913.	Accident.
E. Johnstone, . . .	Manchester, . . .	1909.	Fire.
M. Pennant Jones, . . .	London, . . .	1906.	Fire.
Owen Dan Jones, . . .	Edinburgh, . . .	1901.	Fire.
Walter E. Jones, . . .	Manchester, . . .	1909.	Accident.
A. L. Kavanagh, . . .	London, . . .	1913.	Fire.
James Laird, . . .	Edinburgh, . . .	1913.	Fire.
John Laird, . . .	Glasgow, . . .	1913.	Fire.
G. L. Lambert, . . .	London, . . .	1903.	Fire.
J. R. Liddell, . . .	Newcastle-on-Tyne, . . .	1912.	Fire.
H. E. W. Lutt, . . .	London, . . .	1912.	Life.

*EXAMINERS, 1913—continued.*

NAME.	TOWN.	Date of Election.	Branch.
G. H. M'Causland, . . .	London, . . .	1913.	Fire.
A. Macdermott, . . .	Liverpool, . . .	1913.	Accident.
W. H. Macdermott, . . .	Nottingham, . . .	1911.	Fire.
R. Mackay, . . .	Aberdeen, . . .	1913.	Accident.
J. W. L. M'Lean, . . .	Liverpool, . . .	1910.	Accident.
G. F. Marshall, . . .	Birmingham, . . .	1913.	Accident.
W. T. May, . . .	Liverpool, . . .	1913.	Life.
E. H. Minnion, . . .	London, . . .	1910.	Fire.
George C. Morant, . . .	Hove, Sussex, . . .	1909.	Fire.
R. Y. Murray-Wright, . . .	Dublin, . . .	1913.	Fire.
W. G. Neish, . . .	Newcastle-on-Tyne, . . .	1904.	Life.
E. F. Newlands, . . .	Edinburgh, . . .	1908.	Fire.
P. L. Newman, . . .	York, . . .	1899.	Life.
H. D. O'Donnell, . . .	London, . . .	1913.	Accident.
F. W. Panton, . . .	Newcastle-on-Tyne, . . .	1908.	Fire.
H. J. Pearce, . . .	London, . . .	1904.	Life.
T. B. Ponsonby, . . .	London, . . .	1913.	Fire.
J. S. Proctor, . . .	Glasgow, . . .	1913.	Fire.
W. Richardson, . . .	Edinburgh, . . .	1903.	Fire.
F. H. Rickwood, . . .	London, . . .	1911.	Accident.
J. B. Roberts, . . .	Leeds, . . .	1898.	Fire.
A. Robertson, . . .	Liverpool, . . .	1912.	Life.
A. D. Robertson, . . .	Liverpool, . . .	1909.	Fire.
F. W. Robertson, . . .	Edinburgh, . . .	1913.	Life.
J. Robertson, . . .	Aberdeen, . . .	1904.	Fire.
R. M. M. Roddick, . . .	Edinburgh, . . .	1909.	Life.
R. H. Russel, . . .	Brighton, . . .	1903.	Fire.
S. G. C. Russell, . . .	London, . . .	1913.	Fire.
G. M. Searle, . . .	London, . . .	1913.	Life.
W. Macintyre Shaw, . . .	Glasgow, . . .	1911.	Accident.
T. F. Sherman, . . .	Liverpool, . . .	1913.	Fire.
S. A. G. Smith, . . .	Manchester, . . .	1913.	Fire.
D. H. Gordon Smith, . . .	Leeds, . . .	1913.	Accident.
A. W. Sneath, . . .	Leeds, . . .	1903.	Fire.
P. C. Spence, . . .	Liverpool, . . .	1912.	Fire.
G. C. Stenhouse, . . .	Edinburgh, . . .	1911.	Life.
J. Swanson, . . .	London, . . .	1911.	Accident.
Robert Taylor, . . .	Leeds, . . .	1906.	Fire.
W. E. Taylor, . . .	London, . . .	1911.	Accident.
Windsor Thorp, . . .	Leeds, . . .	1912.	Fire.
L. J. Towle, . . .	Nottingham, . . .	1909.	Fire.
T. P. Wansbrough, . . .	London, . . .	1912.	Life.
E. F. Williamson, . . .	Birmingham, . . .	1912.	Fire.
Arthur Worley, . . .	London, . . .	1910.	Accident.
W. Worthington, . . .	Liverpool, . . .	1913.	Life.
Alex. B. Wright, . . .	London, . . .	1913.	Fire.
Henry Wyatt, . . .	Liverpool, . . .	1911.	Fire.
A. W. Yeo, . . .	London, . . .	1910.	Fire.

# THE CHARTERED INSURANCE INSTITUTE.

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## LIST OF SUBSCRIBING OFFICES, 1912.

- ALLIANCE ASSURANCE COMPANY, LIMITED.  
ATLAS ASSURANCE COMPANY, LIMITED.  
CALEDONIAN INSURANCE COMPANY.  
COMMERCIAL UNION ASSURANCE COMPANY, LIMITED.  
COUNTY FIRE OFFICE, LIMITED.  
FRIENDS' PROVIDENT INSTITUTION.  
GUARDIAN ASSURANCE COMPANY, LIMITED.  
LAW UNION AND ROCK INSURANCE COMPANY, LIMITED.  
LIVERPOOL AND LONDON AND GLOBE INSURANCE COMPANY, LIMITED.  
LONDON AND LANCASHIRE FIRE INSURANCE COMPANY, LIMITED.  
NETHERLANDS FIRE AND LIFE INSURANCE COMPANY.  
NORTHERN ASSURANCE COMPANY, LIMITED.  
NORWICH UNION FIRE INSURANCE SOCIETY, LIMITED.  
PHŒNIX ASSURANCE COMPANY, LIMITED.  
PRUDENTIAL ASSURANCE COMPANY, LIMITED.  
ROYAL INSURANCE COMPANY, LIMITED.  
SCOTTISH UNION & NATIONAL INSURANCE COMPANY.  
STATE ASSURANCE COMPANY, LIMITED.  
SUN INSURANCE OFFICE.  
UNION ASSURANCE SOCIETY, LIMITED.  
YORKSHIRE INSURANCE COMPANY, LIMITED.

# THE CHARTERED INSURANCE INSTITUTE.

## Special Reserve Fund, 1912.

*In response to Appeal by Mr. O. Morgan Owen.*

						£	s.	D.
Abstainers' and General, ...	...	...	...	...	...	10	0	0
Alliance, ...	...	...	...	...	...	105	0	0
Atlas, ...	...	...	...	...	...	105	0	0
British General, ...	...	...	...	...	...	26	5	0
British Law, ...	...	...	...	...	...	26	5	0
Car and General, ...	...	...	...	...	...	50	0	0
Century, ...	...	...	...	...	...	52	10	0
Commercial Union, ...	...	...	...	...	...	105	0	0
County, ...	...	...	...	...	...	52	10	0
Ecclesiastical, ...	...	...	...	...	...	105	0	0
Fine Art and General, ...	...	...	...	...	...	105	0	0
General Accident, ...	...	...	...	...	...	52	10	0
Guardian, ...	...	...	...	...	...	105	0	0
Law Fire ...	...	...	...	...	...	52	10	0
Law Union and Rock, ...	...	...	...	...	...	105	0	0
Liverpool and London and Globe, ...	...	...	...	...	...	105	0	0
London Assurance, ...	...	...	...	...	...	105	0	0
London and Lancashire Fire, ...	...	...	...	...	...	105	0	0
London and Lancashire Life and General, ...	...	...	...	...	...	50	0	0
North British and Mercantile, ...	...	...	...	...	...	105	0	0
Northern, ...	...	...	...	...	...	105	0	0
Norwich Union Fire, ...	...	...	...	...	...	105	0	0
Phoenix, ...	...	...	...	...	...	105	0	0
Royal, ...	...	...	...	...	...	105	0	0
Royal Exchange, ...	...	...	...	...	...	105	0	0
Scottish Union and National, ...	...	...	...	...	...	105	0	0
State, ...	...	...	...	...	...	105	0	0
Sun Fire, ...	...	...	...	...	...	105	0	0
Sun Life, ...	...	...	...	...	...	26	5	0
Westminster, ...	...	...	...	...	...	52	10	0
Western, ...	...	...	...	...	...	26	5	0
Yorkshire, ...	...	...	...	...	...	105	0	0
						<hr/>		
						£2,577	10	0
						<hr/>		



# THE CHARTERED INSURANCE INSTITUTE.

## INCOME AND EXPENDITURE ACCOUNT for the Year ending December 31st, 1912.

Income.			Expenditure.		
	£	s. d.		£	s. d.
<b>To JOURNAL SALES—</b>			<b>By JOURNALS—</b>		
Institutes ...	...	227 0 5	Printing Volume XIV. ...	...	221 12 0
C. & E. Layton ...	...	36 3 10			
Sundries ...	...	18 10 4	<b>„ EXAMINATIONS—</b>		
			Printing and Stationery ...	132 2 9	
<b>„ EXAMINATIONS—</b>			Postages ...	10 15 10	
Entrance Fees, etc.	...	425 5 6	Clerical Assistance ...	52 10 0	
					195 8 7
<b>„ CONTRIBUTIONS—</b>			<b>„ GENERAL EXPENSES—</b>		
Insurance Companies ...	...	99 6 0	Secretary's Salary ...	200 0 0	
Institute Levies ...	...	123 17 3	Allowance for Secretary's Office Expenses	15 0 0	
Colonial Institutes ...	...	12 12 0	Audit Fee ...	5 5 0	
			Postages and Petty Cash ...	44 7 8	
Bank Interest ...	...	235 15 3	Printing and Stationery ...	36 7 5	
<b>„ BALANCE—</b>			Secretary's Expenses attending Conference and Council Meetings ...	34 11 8	
Excess of Expenditure over Income for the year ...	...	10 17 3	Publication Committee's Expenses ...	5 0 0	
			Clerical Assistance ...	3 3 6	
			Nomination Forms and Seal ..	81 2 3	
					424 17 6
			<b>„ Legal Charges and Printing re Charter and Bye-laws ...</b>		116 16 4
					<u>£958 14 5</u>



# BALANCE SHEET, December 31st, 1912.

## Liabilities.

	£	s.	d.	£	s.	d.
Sundry Creditors ... ..	...	...	...	290	16	3
INCOME AND EXPENDITURE ACCOUNT—						
Surplus as per last Account ... ..	115	11	2			
Less Excess of Expenditure over Income for the Year 1912, as per Account ...	10	17	3	104	13	11
				<u>£395</u>	<u>10</u>	<u>2</u>

## Assets.

Cash at Bankers ... ..	...	...	...	...	...	...	£	s.	d.
C. & E. Layton, for Journals sold by them ...	...	...	...	...	...	...	29	10	1
Insurance Companies' Contributions and Institute Levies received in 1913 ... ..	...	...	...	...	...	...	36	3	10
Journal, Volume XV. (not distributed at this date)—Cost of Printing ... ..	...	...	...	...	...	...	114	8	9
							215	7	6
							<u>£395</u>	<u>10</u>	<u>2</u>

## RUTTER PRIZE FUND.

	£	s.	d.
To Donation by F. W. P. Rutter, Esq., 15th February, 1912	200	0	0
„ Bank Interest ... ..	3	2	3
	<u>£203</u>	<u>2</u>	<u>3</u>

	£	s.	d.
By Investment 1,000 dols. Southampton Railway Co. Bonds, guaranteed by the Province of New Brunswick, cost	199	17	7
„ Balance in Bank ... ..	3	4	8
	<u>£203</u>	<u>2</u>	<u>3</u>

## GENERAL PRIZE FUND.

	£	s.	d.
To Donation by A. Player Fedden, Esq., 23rd May, 1912	50	0	0
„ Bank Interest ... ..	0	14	6
	<u>£50</u>	<u>14</u>	<u>6</u>

	£	s.	d.
By Balance in Bank ... ..	50	14	6
	<u>£50</u>	<u>14</u>	<u>6</u>

# SPECIAL RESERVE FUND.

Liabilities.		Assets.	
	£ s. d.		£ s. d.
To Donations by Insurance Companies	... ..	By Investment £3,000 Metropolitan Water Board "B"	
„ Bank Interest, ... ..	... ..	Stock at £82½ per cent., cost	2,481 7 9
		„ Balance in Bank	... 108 9 10
			<u>£2,589 17 7</u>

We have audited the foregoing Income and Expenditure Account and the above Balance Sheet, and hereby certify their correctness.  
 We have obtained all the information and explanations we have required.  
 We have inspected the Securities representing the Special Funds.

DAVID SMITH, GARNETT & CO.,  
*Chartered Accountants,*  
 MANCHESTER.

2nd May, 1913.

# THE CHARTERED INSURANCE INSTITUTE.

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## THE INSURANCE INSTITUTE OF ABERDEEN.

*Founded 1911.*

*Objects:* The cultivation of knowledge of Insurance business generally, the formation of a Library, and the promotion of social intercourse among those connected with the Insurance profession.

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PRESIDENT—George Newlands, F.C.I.I., *Scottish Temperance.*

VICE-PRESIDENTS—G. W. W. Barclay, M.A., F.R.S.E., F.C.I.I., *North British and Mercantile*; Archd. F. Rae, F.C.I.I., *London and Lancashire Fire*; J. Robertson, F.C.I.I., *Northern.*

COUNCIL—Erskine M. Aird, *Caledonian*; R. S. Anderson, *General*; W. Gall, *Liverpool and London and Globe*; N. S. Litster, *Caledonian*; C. P. Skene, *Royal*; W. Stables, F.C.I.I., *National of Great Britain*; H. B. Stedman, *Commercial Union*; Edwin Tait, F.F.A., *North British and Mercantile.*

HON. TREASURER—Robert Mackay, F.F.A., F.C.I.I., *Northern.*

HON. LIBRARIAN—G. A. Angus, F.C.I.I., A.C.I.S., *Commercial Union.*

HON. SECRETARY—Alex. B. Hughes, Assessor, 25 Crown Street, Aberdeen.

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## THE INSURANCE INSTITUTE OF BELFAST.

*Founded 1907.*

*Objects:* The cultivation of knowledge of Insurance business generally, the formation of a Library, and the promotion of social intercourse among the members of the Insurance profession in Belfast district.

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PRESIDENT—James Williamson, *London and Lancashire Life and General.*

VICE-PRESIDENTS—A. S. Fraser, *Commercial Union*; Francis K. Fenton, *Scottish Amicable*; W. J. Jefferson, *Royal*; James Black, *Royal*; H. Herdman, *North British and Mercantile*; A. S. Atkinson, *State.*

COUNCIL—W. J. Jefferson, Junr., *Royal*; W. M. Potterton, *Scottish Widows*; George E. Taylor, *Phoenix*; C. H. Bell, *Ocean*; W. E. Hughes, *Atlas*; H. C. Montgomery, *Northern*; W. W. Alderdice, *Hand-in-Hand*; G. E. Crawford, *Gresham Fire*; H. B. Williamson, *Employers' Liability.*

HON. TREASURER—Ernest H. Hewitt, *London Assurance Corporation.*

HON. LIBRARIAN—C. Mitford Martin, *Scottish Widows*.

HON. SECRETARY—James M. Scott, *London and Lancashire Fire*, 11 Donegall Square, West, Belfast.

## THE INSURANCE INSTITUTE OF BIRMINGHAM.

*Founded 1887.*

*Objects:* The reading of papers and delivery of lectures upon subjects connected with Insurance business generally, the discussion of all questions relating thereto, and the promotion of social intercourse amongst the members of the profession in Birmingham and district.

The Ordinary Meetings of the Institute are held during October to March. The Annual General Meeting is held in April or May.

PRESIDENT—G. Hudson Greaves, *Atlas*.

VICE-PRESIDENTS—H. C. Saunders, *Scottish Widows'*; W. H. Turnbull, *Royal*.

COUNCIL—G. Barnfield, *Guardian*; A. J. Lewis, *Sun*; G. F. Marshall, *Royal Exchange*; P. J. Milnes, *North British and Mercantile*; A. E. Patrick, *Alliance*; H. L. Porter, *Yorkshire*; H. J. Tapscott, *Royal Exchange*; E. F. Williamson, *Norwich Union*.

HON. TREASURER—W. H. Knight, *Northern*.

HON. SECRETARY—Ernest Brooke, Assessor, 19 Temple Street.

## THE INSURANCE INSTITUTE OF BRIGHTON.

*Established 1912.*

*Objects:* The reading of papers and delivery of lectures upon subjects connected with Insurance business generally, the discussion of all questions relating thereto, and the promotion of social intercourse amongst the members of the profession, and generally conform with the objects of the Chartered Insurance Institute.

PRESIDENT—R. H. Russel, *Atlas*.

VICE-PRESIDENTS—D. Boag, F.C.I.I., *Royal Exchange*; J. G. Escott, F.C.I.I., *General Accident*; P. E. Lawford, *Guardian*; S. H. Palmer, F.C.I.I., *Employers' Liability*.

COUNCIL—J. Appleton, *Royal*; H. B. Cox, *Ocean*; J. P. Green, F.C.I.I., *Norwich Union*; A. J. D. Leonard, F.C.I.I., *Phœnix*; H. G. Rowcliffe, *Royal*.

HON. TREASURER—S. M. Lampard, *Royal*.

HON. LIBRARIAN—A. Q. Browning, F.C.I.I., *Essex and Suffolk*.

HON. SECRETARY—H. A. Goldsmith, A.C.I.I., *Ocean*, 20 West Street.

## THE INSURANCE INSTITUTE OF BRISTOL.

*Founded 1890.*

*Objects:* The cultivation of knowledge on Insurance subjects, and social intercourse amongst members.

PRESIDENT—John Bennet, *Scottish Insurance Corporation*.

VICE-PRESIDENTS—J. S. Baker, *London and Lancashire Fire*; F. A. McKeand, *Norwich Union Fire*; T. B. Bingham Hall, *Caledonian*; J. Y. Crowe, Fred J. Young, *United Kingdom Life*; A. B. Waters, *Liverpool and London and Globe*.

COMMITTEE—F. Norton Andrews, *Commercial Union*; H. W. Cary, *County*; W. C. Dawson, *Commercial Union*; F. J. Giddings, *Scottish Insurance*; S. J. Gillingham, *Northern*; J. H. Goodwin, *Union*; F. W. Ridgway, *British Law*; W. E. B. Westcott, *Alliance*; R. E. Witherspoon, *Employers' Liability*; F. H. B. Yerbury, *Phoenix*.

HON. TREASURER—R. Weeks, *Western*.

HON. AUDITOR—S. W. Pullen.

HON. LIBRARIAN—W. Blair, *Northern*.

HON. SECRETARY—James Bolton, *Union*.

ASSISTANT HON. SECRETARY—R. H. J. Kepple, *Sun Fire*.

## THE INSURANCE INSTITUTE OF CARDIFF.

*Founded 1905.*

*Objects:* The cultivation of knowledge of Insurance business, the promotion of social intercourse, and the formation of a Library of books upon professional subjects.

PRESIDENT—C. H. Dean, Assessor.

VICE-PRESIDENT—Norman C. Plummer, *Liverpool and London and Globe*.

PAST PRESIDENTS—W. Southwell Jones, *North British and Mercantile*; Clement F. Taylor, *Law Union and Rock*, Bristol; G. F. Crabbe, *Sun Life*; T. E. Halfpenny, *Yorkshire*; A. D. K. Brown, *Guardian*, Manchester; John Phillips, *North British and Mercantile*; Llewelyn Pugh, *Yorkshire*; A. D. Goodwin, *London and Lancashire Fire*.

COMMITTEE—J. Burdekin, *Sun Fire*; W. J. Drewett, *Union*; C. W. Matthews, *Alliance*; H. Meanock, *Welsh*; H. J. Powell, Assessor; F. J. L. Tavener, *Royal*; R. E. Thomas, *Phoenix*; S. Tyson, *Liverpool and London and Globe*.

HON. TREASURER AND LIBRARIAN—W. Evan Lloyd, *Sun Fire*.

HON. AUDITORS—C. Stephens, *London and Lancashire Fire*; Jas. Edwards, *North British and Mercantile*.

HON. SECRETARY—Norman C. Plummer, *Liverpool and London and Globe*, 10 Windsor Place, Cardiff.

## THE INSURANCE INSTITUTE OF DUNDEE.

*Founded 1909.*

*Objects:* The cultivation of knowledge of Insurance business generally, the formation of a Library, and the promotion of social intercourse among those connected with the Insurance profession.

PRESIDENT—J. A. Tombazis, *Royal Exchange*.

VICE-PRESIDENTS—J. Thobaven, *Commercial Union*; J. S. Braidwood, *British Crown*.

COUNCIL—A. G. Scott, *Norwich Union*; H. C. Alexander, *Northern*; T. W. Robertson, *State*; T. E. Suttie, *North British and Mercantile*.

HON. TREASURER—G. A. Edmunds, *Liverpool and London and Globe*.

HON. SECRETARY—W. S. Whyte, *Scottish Insurance Corporation*, 39 Albert Square, Dundee.

## THE INSURANCE SOCIETY OF EDINBURGH.

*Founded 1901.*

*Objects:* The cultivation of knowledge of Insurance business generally (excluding Actuarial, Mathematical, and other cognate subjects, these being already provided for by the Faculty of Actuaries); the formation of a Library of professional works for the use of Members and Associates; and the promotion of social intercourse among those connected with the Insurance profession.

PRESIDENT—Harry Armour.

PAST PRESIDENTS—Sir David Paulin, F.F.A., F.R.S.E.; Henry Brown, James Allan Cook, Walter A. Smith, F.F.A.; Leonard W. Dickson, C.A.; D. M. Cameron.

VICE-PRESIDENTS—George M. Low, F.F.A., F.I.A., F.R.S.E.; J. Lamb, F.F.A., C.A.; T. M. Gardiner, James Graham Watson, C.A., F.F.A.; Gordon Douglas, F.F.A., F.I.A.; Owen Dan Jones, John Gunn.

COUNCIL—John Cruickshank, Jas. L. C. Bartlett, Thomas Stewart, D. Waugh. John Davidson, Jas. Learmont, Jas. Laird, E. F. Newlands, C. Symington, A. J. Queen, J. H. M'Robert, W. Sutherland.

AUDITORS—John Wilson, C.A.; S. M'Clure.

HON. EDITOR OF TRANSACTIONS—S. d'E. Colam, F.F.A., 115 George Street.

HON. LIBRARIAN—H. M. Fyfe, 64 Princes Street.

HON. TREASURER—W. Richardson, 47 George Street.

HON. SECRETARY—Alex. Dick, 115 George Street.

## THE INSURANCE AND ACTUARIAL SOCIETY OF GLASGOW.

*Founded 1881.*

*Objects:* (1st) The promotion of the study of the principles of Fire and Life Assurance, and of Assurance against other contingencies. (2nd) The consideration of all subjects to which the doctrine of probabilities may be applied, as well as the best methods of collecting and applying statistics. (3rd) The consideration of questions bearing on social science or political economy. (4th) The formation of a Library of professional works for the use of Members.

PRESIDENT—C. E. MacGillivray, *Liverpool and London and Globe.*

VICE-PRESIDENTS—A. M. Clydesdale, *Norwich Union Fire*; A. K. Rodger, *Scottish Temperance*; A. Guthrie, *Sun Fire.*

COMMITTEE OF MANAGEMENT—A. L. Bennie, *London and Lancashire Fire*; D. L. Laidlaw, *North British and Mercantile*; Thos. Wallace, *Atlas*; Robert Cumming, B.A., *Union*; P. MacNeil, *Caledonian*; Govan Hewat, *Scottish Widows' Society*; Stewart Lawrie, *Alliance*; J. H. M'Neill, *Scottish Temperance*; Adam Smith, *Phoenix.*

HON. TREASURER—R. E. Taylor, *London Assurance*, 149 West George Street.

HON. SECRETARY—J. Hunter Laidlaw, *Century*, 101 St. Vincent Street.

HON. AUDITOR—W. W. Naismith, C.A., 79 West Regent Street.

## THE INSURANCE INSTITUTE OF HUDDERS- FIELD AND HALIFAX.

*Founded 1913.*

*Objects:* The objects of the Institute shall be the reading of papers and delivery of lectures by Members and Associates, or Experts, not Members or Associates, upon subjects connected with Insurance business, the discussion of all questions relating thereto, and the formation of a Library for the use of Members and Associates, and, generally, the promotion of social intercourse amongst the members of the Insurance profession.



PRESIDENT—Edward Robinson, *Commercial Union*, Huddersfield.

VICE-PRESIDENTS—T. W. Ford, *Royal*, Halifax; W. A. Holroyd, *Sun Fire*, Huddersfield.

COUNCIL—J. H. Eddison, *North British and Mercantile*, Huddersfield; J. W. Heworth, *Liverpool and London and Globe*, Huddersfield; D. A. Macpherson, *London and Lancashire Fire*, Halifax; Joe Nicholl, *Halifax Mutual Plate Glass*, Halifax; L. S. Wilkinson, *London and Lancashire Fire*, Huddersfield; W. Wilkinson, *Sun Fire*, Halifax.

HON. AUDITORS—H. A. Adams, *Sun*, Huddersfield; F. Roebuck, *Royal*, Huddersfield.

HON. TREASURER—H. Turner, *Commercial Union*, Huddersfield.

HON. SECRETARY—J. G. Kidd, *Royal*, 26 Commercial Street, Halifax.

## THE INSURANCE INSTITUTE OF IPSWICH AND SUFFOLK.

*Founded 1913.*

*Objects:* The objects of the Institute shall be the reading of papers and delivery of lectures upon subjects connected with Insurance business generally, the discussion of all questions relating thereto, the formation of a Library for the use of Members and Associates, and the promotion of social intercourse amongst the members of the Insurance profession, and generally to conform with the objects of the Chartered Insurance Institute.

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HON. LIBRARIAN—E. Leonard, *Law Accident*.

HON. TREASURER—J. H. Cooke, *Vulcan*.

HON. SECRETARY—E. R. Tungate, *Commercial Union*, Commercial Union Buildings, Princes Street, Ipswich.

## THE INSURANCE INSTITUTE OF IRELAND, DUBLIN.

*Founded 1885.*

*Objects:* (1st) The promotion of the study of the principles of Fire and Life Assurance, and of Assurance against other contingencies. (2nd) The consideration of all subjects to which the doctrine of probabilities may be applied, as well as the best methods of collecting and applying statistics. (3rd) An organisation for any purpose necessary for the requirements of the profession. (4th) The promotion of a good understanding amongst the members of the Insurance profession in Ireland.

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HON. SECRETARY AND TREASURER—J. Harold Aylward, *Royal*, 45 Dame Street, Dublin.

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## THE INSURANCE INSTITUTE OF LIVERPOOL.

*Founded 1907.*

*Objects:* The cultivation of knowledge of Insurance business generally, the formation of a Library, and the promotion of social intercourse among those connected with the Insurance profession.

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HON. TREASURER—J. Mason Guttridge, *Alliance*, 30 Exchange Street, East.

HON. LIBRARIAN—J. W. Kirkness, *Sun*, 6 Chapel Street.

HON. AUDITORS—T. I. D. Jamieson, *London and Lancashire*; R. Glover, *Commercial Union*.

HON. SECRETARY—A. D. Holbert, *Liverpool and London and Globe*, 1 Dale Street.

## THE INSURANCE INSTITUTE OF LONDON.

*Founded 1907.*

*Objects:* The cultivation of knowledge and information in all matters relating to the various branches of Insurance by means of—(a) The reading of papers or delivery of lectures upon technical or other subjects. (b) The awarding of prizes for papers of merit written by Members and Associates. (c) The circulation of a Journal containing articles of technical and general interest contributed by Members and Associates. (d) A Reference Library and Reading Room and a Lending Library. (e) A Museum containing specimens of Home, Foreign, and Colonial Products, Models, Parts, Drawings and Photographs of Machinery, Appliances, and other objects of interest.



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LIBRARY, LECTURE ROOMS, AND OFFICE—11 Queen Street, Cheapside, E.C.

## THE INSURANCE INSTITUTE OF MANCHESTER.

*Founded 1873.*

*Objects:* The cultivation of knowledge relating to all Insurance subjects, the maintenance of a Library, the promotion of a good understanding amongst the members of the Insurance profession in Manchester, and also, so far as may be practicable, the promotion of the objects of the Chartered Insurance Institute.

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PRESIDENT—Sir Harold Elverston, M.P.

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SECRETARY—E. A. Chambers, A.C.A.

INSTITUTE ADDRESS—16 John Dalton Street, Manchester.

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## THE INSURANCE INSTITUTE OF NEWCASTLE-ON-TYNE.

*Founded 1896.*

*Objects:* The promotion and cultivation of a thorough knowledge of Insurance business by means of the reading of papers, the delivery of lectures upon subjects connected therewith, the discussion of questions relating thereto, the formation of a Library, the inspection of risks and in any other way which may be deemed desirable, and, generally, the promotion of social intercourse amongst the members.

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HON. TREASURER—A. G. McDonald, *Yorkshire*.

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## THE NORTHAMPTON AND BEDFORD INSURANCE INSTITUTE, NORTHAMPTON.

*Founded 1908.*

*Objects:* The reading of papers and delivery of lectures upon subjects connected with Insurance business generally, the discussion of all questions relating thereto, and the promotion of social intercourse amongst the members of the profession.

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HON. SECRETARY AND TREASURER—J. W. Langley, *Law Accident*, 1 Sheep Street, Northampton.

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## THE INSURANCE INSTITUTE OF NORTH STAFFORDSHIRE.

*Founded 1909.*

*Objects:* The cultivation of knowledge of Insurance business generally, the formation of a Library, and the promotion of social intercourse among those connected with the Insurance profession.

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HON. TREASURER—T. W. Hall, *Ocean*.

HON. SECRETARY—H. C. Smith, *Liverpool and London and Globe*, King's Chambers, Wolfe Street, Stoke-on-Trent.

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## THE INSURANCE INSTITUTE OF NORWICH.

*Founded 1886.*

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HON. ASSISTANT SECRETARY—C. Graham Harbord.

Secretaries' Address—9 Surrey Street, Norwich.

## THE INSURANCE INSTITUTE OF NOTTINGHAM.

*Established 1898.*

*Objects:* The reading of papers and the delivery of lectures upon subjects connected with Insurance business generally, the discussion of all questions relating thereto, and the promotion of social intercourse amongst the members of the profession in Nottingham and district.

PRESIDENT—H. E. Turner, *Scottish Union and National*.

VICE-PRESIDENTS—J. W. Foster, *Scottish*; H. A. Thomas, *North British and Mercantile*.

HON. TREASURER—F. Hill, *Norwich Union*.

COUNCIL—G. H. Boyd, *Law Union and Rock*; T. Henshall, *London*; W. D. S. Kirkham, *Alliance*; H. W. Saunderson, *Northern*; \*W. H. Macdermott, *Alliance*; \*H. Taylor, *Royal Exchange*; \*J. Elliot Littlewood, *Scottish Provident*; \*W. Clarkson, *Norwich Union*.

*\*Ex. Officio.*

HON. SECRETARY—L. J. Towle, *Atlas*, 10 Low Pavement, Nottingham.

## THE INSURANCE INSTITUTE OF PERTH.

*Established 1911.*

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AUDITORS—E. N. Taylor, A.C.I.I., Wm. Paton, Junr.

HON. LIBRARIAN—Harry Clarke.

HON. TREASURER—Chas. H. Clarke, A.C.I.I.

HON. SECRETARY—A. Gibbon Thomson, F.C.I.I., General Buildings, Perth.

## THE INSURANCE INSTITUTE OF SHEFFIELD.

*Established 1911.*

*Objects:* The cultivation of knowledge and information in all matters relating to the various branches of Insurance, the formation of a Reference Lending Library, and advancement of the status of the Insurance profession and the promotion of social intercourse among the members.

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PRESIDENT—John D. Hill, *Alliance*.

VICE-PRESIDENTS—Richard Earle, *Royal*; Edwin W. Milburn, *Yorkshire*; G. A. M'Kean, *Commercial Union*.

COUNCIL—J. E. Baker, *Prudential*; G. Dodwell, *Liverpool and London and Globe*; W. A. Mills, *Royal*; T. P. Myers, *Royal Exchange*; L. Phillips, *Alliance*; H. T. Portway, *Atlas*; G. E. Scott, *Ocean*; W. Morris Smith, *Law Accident*.

HON. TREASURER—A. E. Unitt, *Cur and General*.

HON. LIBRARIAN—H. Rowntree, *Alliance*.

HON. SECRETARY—Jno. H. Pindar, *Norwich Union Fire*, 74 High Street, Sheffield.

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## THE INSURANCE INSTITUTE OF SOUTHAMPTON.

*Founded 1913.*

*Objects:* The objects of the Institute shall be the reading of papers and delivery of lectures upon subjects connected with Insurance, business generally, the discussion of all questions relating thereto, and the promotion of social intercourse among the members of the profession, and generally conform with the objects of the Chartered Insurance Institute.

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HON. LIBRARIAN—F. Long, *Ocean*.

HON. AUDITORS—G. E. Stewart, *Alliance*; C. Rolfe, *Guardian*.

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## THE INSURANCE INSTITUTE OF YORKSHIRE, LEEDS.

*Founded 1888.*

*Objects:* The delivery of lectures on subjects connected with Insurance business, the discussion of questions relating thereto, and, generally, the promotion of social intercourse amongst the members of the Insurance profession in Yorkshire.



PRESIDENT—Wm. Webb, *Guardian*.

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AFFILIATED WITH

## THE CHARTERED INSURANCE INSTITUTE.

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*Established 1899.*

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HON. SECRETARY AND TREASURER—Wm. Mathieson, *South African Association Chambers*, 6 Church Square, Cape Town. P.O. Box 486.

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*Founded 1884.*

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## THE INSURANCE INSTITUTE OF TORONTO.

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THE INSURANCE INSTITUTE OF VICTORIA,  
MELBOURNE.*Established 1884.*PRESIDENT—F. T. Bridges, *Australian Mutual Provident Society*.VICE-PRESIDENT—W. E. M. Bagnall, *Law Union and Rock*.

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SECRETARY—E. E. Vines, National Mutual Buildings, 395 Collins Street, Melbourne.

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*Objects:* To maintain and educate orphan or necessitous children of Clerks and Officials of Insurance Companies who were Members of the Orphanage at the time of their death, by placing such children at selected schools, and making money grants for their clothing, between the ages of 6 and 16.

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PRESIDENT—The Right Honourable Lord Rothschild, G.C.V.O.

VICE-PRESIDENTS—Edward Baumer, Northwood, Middlesex; George H. Burnett, Hampstead; John Coles, Chairman, *Clerical, Medical and General Life Assurance Society*; C. G. Fothergill, Director, *London and Lancashire Fire Insurance Co.*; H. Ernst Hall, late Chairman, Fire Offices' Committee; Robert Lewis, *Alliance Assurance Co.*; Marlborough R. Pryor, Director, *Sun Insurance Office*.

CHAIRMAN—Samuel J. Pipkin, *Atlas Assurance Co.*

DEPUTY-CHAIRMAN—O. Morgan Owen, *Alliance Assurance Co.*

OFFICE—65 Watling Street, London, E.C.

SECRETARY—G. H. Whiteman.

## THE CHARTERED INSURANCE INSTITUTE.

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THE Seventeenth Annual Conference (the second of the Chartered Institute) was held at the Mansion House, Dublin, on Friday, 6th June, 1913, on the invitation of the Insurance Institute of Ireland. Mr. J. A. Cook (General Manager, Scottish Union and National Insurance Company), President of the Institute, occupied the chair, and there were present 37 members as recorded in the attendance book.

After the adoption of the minutes of the last Conference, the SECRETARY read the following

### REPORT OF THE COUNCIL FOR THE YEAR 1912-13.

The past year has been full of activity consequent on the many duties requiring attention under the regulations of the Charter and Bye-Laws. It has been necessary to call no less than four meetings of the Council in order to discuss matters on which it alone could decide. The election of the Fellows and Associates has been a matter of great concern. There will be reported to Conference the names of 675 Fellows and 181 Associates who have been elected and who, having paid their subscriptions, have received Diplomas.

The examinations conducted by the Institute have received an encouraging impetus since the Charter was granted. The number of candidates who entered for the examinations last March was 1,316, as compared with 935 the previous year. The number who sat was 1,120, compared with 850 in 1912. Full particulars and statistics will be laid before the Conference.

The fifteenth volume of the Journal contains sixteen well-selected papers on a variety of subjects, of which nine may be classed as Fire, three Life, two Accident, and two General.

The papers are contributed by fourteen Local Institutes, two being from affiliated Institutes at Toronto and Victoria. The Toronto paper, "Forest Fire Waste in Canada," is illustrated by four landscape views—a new feature. The Journal also contains, in addition to other matter, the Charter and Bye-Laws and an index to both for reference.

The Treasurer's Statement of Accounts for the year ended 31st December last, duly audited, will be submitted to the Conference.

It is with very great regret that the Council have to report the resignation as from 6th June next of Mr. James Ostler, the esteemed Treasurer of the Institute, the first President of the "Federation," and the prime mover in an enterprise which is now such a power for good in the Insurance profession.

In view of the enlarged scope and responsibilities of the Institute it was thought desirable to strengthen its finances by forming a Reserve Fund. The Past President, Mr. O. Morgan Owen, accordingly, before retiring from office issued an appeal to the Insurance Offices for special contributions towards this object with most gratifying results, the sum of £2,577 10s. 0d. having been subscribed by thirty-two offices. The list will be published in next issue of the Journal. The fees from the large number of Fellows and Associates who have been elected amount to the considerable sum of £3,868 4s. 0d., but this latter sum will not appear until the Accounts for the financial year ending 31st December next are published. Most of the money so received has been invested.

The Council have to report with deep regret the decease on 26th April of their esteemed colleague Mr. N. B. Gunn, Manager of the Scottish Widows Fund, Edinburgh, and a Past President of the Institute. They also record with deep regret the loss through death on 1st January, 1913, of Mr. John G. Boss, J.P., an ex-President of the Institute. Mr. Boss took a great interest in the Educational work of the Institute, and it was in his year of office as President that what is practically the present scheme was elaborated.

Mr. Charles Stevenson, who has been Secretary of the

Institute since its foundation as The Federation of Insurance Institutes, has sent in his resignation, which was accepted by the Council with regret. Mr. E. W. Humphry, Secretary of the Insurance Officials' Society, has been appointed Mr. Stevenson's successor. From the 1st July the Offices of the Institute will be at 11 Queen Street, London, E.C.

The Insurance Clerks' Orphanage makes steady progress, and the tenth Annual Report will be given in full in the next issue of the Journal.

The Council desire to tender their thanks to the donors of the following publications which have been received during the year:—

The Quarterly Journal of The Institute of Actuaries for the past year, from the Council.

The Transactions of The Faculty of Actuaries, from the Council.

The Bulletin of The Insurance Society of New York, from the Secretary.

The Bulletin of Toronto, monthly, from the Publishers.

The Proceedings of the Thirty-seventh Annual Meeting of the Fire Underwriters' Association of the Pacific, from the Librarian.

The Transactions and Reports of the Insurance Institutes of Toronto, Victoria, and the Cape of Good Hope.

The Bulletin of the Insurance Library Association of Boston.

Proceedings of the Fourth Annual Conference of The Insurance Institute of America.

The Up-to-Date Agency Inspector, by Victor Lawson, from the Publishers (Edinburgh: Messrs. Lorimer & Chalmers).

Life Assurance in Business, from the Publishers (London: The Joint Stock Companies' Journal, Ltd.).

The Liability of the General Public at Common Law Arising out of Negligence, by Herbert Rowntree, from the Author. (London: Post Magazine Press).

Insurance Blue Book and Guide for 1912, from the Proprietors.

The Valuation and Insurance of Patterns, Models, Moulds, Designs, Drawings, Damask Cards, Textile Printers' Blocks and Engraved Rollers, and such like, by H. H. Montgomery, F.A.I., from the Author.

Montgomery Depreciation Tables, by H. H. Montgomery, F.A.I., from the Author.



Report upon Recent Cotton Fires in Alexandria, 1892-1901, by H. H. Montgomery, from the Belfast Institute. (Two copies).

1912-1913 Calendar of the Glasgow Athenæum Commercial College, from the Director of Studies.

Insurance Against Loss of Profits by Fire, by Alex. B. Wright, from the Author.

Post Magazine Almanac 1913, from the Publishers (London: The Exors. of the late T. J. W. Buckley).

The cordial thanks of the Council are offered to all who, during an exceptionally busy year, have contributed to the success and smooth working of the Institute. Special thanks are given to the Examiners, the Examiners' Committee, and to the Joint Secretaries for their devoted services in the enormous work they have accomplished; to the Publications' Committee and the Honorary Secretary for the admirable work rendered in the production of the Journal; and to the Executive Committee who have had frequent meetings and have watched with unremitting care the interests of the Institute during the year.

The Council cannot conclude this report without recording their obligation to the President for the strenuous work he has done in a most trying year, and for the energy and tact he has shown in its performance.

They also thank the Insurance press for the publicity it has given to the operations of the Institute.

The PRESIDENT referred to the loss sustained by the Chartered Institute by the death of Mr. Neil B. Gunn, a Past President of the Institute, and it was resolved that an appreciation of his eminent services be recorded on the minutes, and that a copy of the resolution be sent to Mrs. Gunn, with a sincere expression of sympathy from the Conference.

The PRESIDENT referred to the loss sustained by the Chartered Institute by the death of Mr. John G. Boss, a Past President of the Institute, and it was resolved that an appreciation of his eminent services be recorded on the



minutes, and that a copy of the resolution be sent to Mrs. Boss, with a sincere expression of sympathy from the Conference.

The PRESIDENT (Mr. J. A. Cook) then addressed the Conference as follows:—

Gentlemen,—The Chartered Insurance Institute, the coming into existence of which was the result of the ideals and the efforts of some of the most enlightened and most practical men in our business, has now completed what may be called its first full canonical year.

Like the early history of all movements both great and small, the first year has had its own interests and its own troubles, and it may be that in the errors and shortcomings of its youthful history, as well as in its trials and difficulties, we may have discovered much to teach and much to give us heart and hope.

It would be idle to deny or endeavour to mitigate the serious problems which have had to be faced and surmounted—problems which were many of them inseparably involved with the personal equation of things as well as bound up in the ultimate good of the Institute.

Your Council has had many anxious issues to adjust, but I think I may congratulate them in the name of the Institute on having come through their trials with credit to themselves and to the advantage of the organisation.

The principal problem of the year was, of course, the selection and election of Fellows and Associates in terms of the powers conferred by Clause 16 (a) of the Charter. I confess that at times, when I saw the warring forces at work, I was apt to be apprehensive of the issues, and to where they would lead.

There were three distinct currents of thought. There were those whose opinion was that the powers under the Clause I have referred to should not be exercised at all, and that all Fellowships and Associateships should be granted only as the result of examination.

There was, of course, much to be said in favour of the self-

denying ordinance which was thus proposed, but the party who favoured the idea were not numerous, and there was a general consensus of opinion that men who had worked strenuously and disinterestedly in the cause of Local Institutes, and whose ideals were centred in a Charter, were entitled to the honours which the framers of the Charter clearly contemplated when the provision was inserted.

Diametrically opposed to the idea of no elections was the theory of what I may call the rank and file, and which was that the powers given in the Charter were the intentions of the Charter, and that a liberal and widespread conferring of diplomas was what was intended, and what would yield the best results.

On examination this theory did not commend itself to your Council. Honours thus dispensed and dissipated would have ceased to be honours at all, and if, as I have reason to believe, there be some who still think that in what was ultimately done there has been a far too generous exercise of our privileges, their grievance would have been very seriously aggravated if we had yielded to the clamours of the newspaper correspondent.

The middle course of discrimination is what your Council, I think, very wisely decided upon, and while that discrimination was not all we could have wished, the difficulties and impossibilities of reconciling differences were inseparable from the position. Each separate Local Institute had its own standard and its own theories, and while I believe that in no single instance did an Institute get all it desired, I am satisfied that, taken all round, the result was a compromise in the main satisfactory.

I sympathise with all who are disappointed, but I would ask them to believe that the Council acted in difficult circumstances with the best interests of the Institute at heart, and I would appeal to all, the favoured and the less fortunate alike, to forget the past and work from now forward with the single purpose of furthering the best interests of our Charter, and striving towards its highest ideals.

The first year of our new Constitution has been marked by

a most gratifying increase in the number of candidates sitting for examination, an increase in the total number of from 850 to 1,120—an improvement of about 33 per cent.—which is a fitting compliment to the enhanced dignity which our organisation now enjoys. I make venture to think that in time the advantages of possessing one of our Diplomas as the result of examination will more and more appeal to the youth of our profession, to the obvious advantage of not only the men themselves, but of the Companies generally, and in realisation of one of the objects of our existence, namely, the rendering the conduct of our business “more effective, safe, and scientific.”

I would like to refer to the Degree of Fellow by examination. This is a matter as to which certain members of the Council entertain very decided views, and I am pleased that the decision come to involved the acceptance of a very high standard of Insurance knowledge.

Put briefly, the position is this. A candidate may qualify as an Associate in any one of the three branches, namely, Fire, Life, or Accident, but before he can by examination secure a Fellowship he must satisfy the Examiners' Committee that in all three branches he is qualified to speak intelligently on general Insurance principles and practice, so that to the world in general, and to ourselves in particular, he will represent a high standard of Insurance education.

We had hoped to have had an examination of Associates for graduation to the Fellowship in the Spring of this year, but owing to the enormous rush of work entailed by the ordinary examinations, and more particularly the serious illness of our excellent and enthusiastic Secretary to the Examiners' Committee, Mr. Holbrook, now happily recovered, the examination had to be postponed. The matter has not, however, been overlooked, and, as you will have observed from the Report of the Executive Committee of Examiners, an examination will be arranged to be held early next year.

In this connection I may here mention as a matter of interest to candidates that the prize given by Mr. Rutter will be awarded to the most distinguished candidate who in each year obtains the Fellowship by examination.

A feature of the year's history has been the resignation of two of our most important officials, the Honorary Treasurer and the Secretary. To Mr. Ostler the Institute will always owe a deep debt of gratitude for the services he has rendered ably, faithfully, and willingly, and it would have given me very great pleasure to have welcomed him as my successor in the Presidential Chair, and in this sentiment I venture to think I have Mr. Hamilton's support. Mr. Ostler, however, with his usual becoming modesty, declined to have his name submitted for your consideration. We shall always remember him, however, as one of the sagacious pioneers of the movement now happily so well under way.

We have also had to deal with the resignation of Mr. Stevenson, who since 1899 has acted conscientiously and faithfully as Secretary to, in succession, the Federation, the Institute, and the Chartered Institute. Mr. Stevenson felt that the removal of the Institute to London and his own professional business in the Manchester district were not reconcilable, and that for him to make the removal could only result in the loss of his personal *clientele*. I am pleased to think that the Institute has dealt with the circumstances of his case in a generous spirit, and I am sure I am voicing the sentiments of all present when I wish him in his restricted work and reduced responsibilities a period of prolonged health and happiness.

We regard ourselves as fortunate in having secured as Mr. Stevenson's successor Mr. E. W. Humphry, who has been well trained in Insurance business, who is an Associate of the Institute of Actuaries, and who, during the past year, has acted and who in future will also continue to act as Secretary of the Insurance Officials' Society. We believe that in Mr. Humphry we will find a capable, painstaking, and conscientious Secretary.

A year ago it was mentioned by my amiable and popular predecessor that the time might come when it would be desirable to remove the headquarters of the Chartered Institute to London. The removal has not yet taken place, but Offices have been engaged in the same building as the

London Institute, and as from the 1st July next the address of our home will be Queen Street, Cheapside. For sentimental reasons we are sorry to have had to remove from the birthplace of Insurance Institutes, but London is the capital of our nation, and our Institute, being now a national one, its home naturally fell to be transferred to the Metropolis.

The finances of the Institute have during the past twelve months received a substantial fillip by the generous response to my predecessor's appeal for a Reserve Fund, and from the fees received from elected Fellows and Associates. Substantial as are these additions to our capital, I would take this opportunity of mentioning that the revenue therefrom will do little more than meet the additional annual expense which will have to be met consequent upon the removal of the offices to London, and the improved status and increased work of the more extended organisation. It is satisfactory, however, to know that our Capital Account is so substantial, and that it provides a sufficient Reserve Fund for the ordinary needs of the Institute.

Mention was made a year ago of the monies received for prizes, and I have already referred to the use to which one donation is to be devoted.

It is my great pleasure to report that the balance of a Fund which had been raised by the Directors, Officials, and staff of the Employers' Liability Assurance Corporation for the purpose of doing honour to the memory of their Manager and one of your distinguished Presidents, the late Mr. Stanley Brown, has been handed over to the Institute. The balance thus handed over amounts to £300, and I am pleased to be able to inform you that the annual proceeds will be devoted to the award of two prizes to be known as the "Stanley Brown Prizes" to be given to the two most distinguished students who take the Degree of Associate through the Accident Branch in each year. We are, I feel sure, deeply grateful to our friends of the Employers' Liability Assurance Corporation for the handsome donation, and are pleased to think it will always have associated with it the name of one who was so honoured amongst ourselves.



Reference was made a year ago to the beginning of a General Prize Fund which had been made by the substantial donation kindly given by our friend, Mr. Fedden. I am sorry to say that during the year no progress has been made with this Fund. The explanation is that your Executive Committee were of opinion that so great had been the financial strain during the past twelve months upon Fellows and Associates, and also upon the provincial Members of the Council, that the time was not opportune for an appeal. I leave this matter to the consideration of my successor in the hope and belief that the way will open up to him to put the Fund upon a substantial footing.

The Orphanage continues to pursue its course of charitable usefulness. Its funds are not, however, outgrowing the demands upon them, and I would appeal to Local Institutes to set prominently before their members the claims of this branch of our interests. I am sure we all welcome the special efforts that have been made, and will continue to be made, by various Institutes from time to time. All honour to them; but what I would like to see more, and in addition, is a general interest and support on the part of the clerks themselves. I would appeal to Local Institutes to take up this aspect of things, so that an all-round, and what I might call a more homelike identification with the movement might be taken by those in whose interests, or shall I say in the interests of whose dependants, the Orphanage was really established. Our friend, Mr. Pipkin, is, like Oliver Twist, always able and always anxious to assimilate more—and surely such an enthusiasm as his should never be disappointed.

A word here as to the ordinary work of Local Institutes. In their early history a syllabus of lectures for the Winter's work was a necessary, and sometimes the only part, of the programme of operations. I do not wish to criticise the schemes of the past, and so long as able lecturers on new and interesting subjects can be secured, so long will they form a necessary and desirable part of an Institute's work. But the time is now coming, and I think rapidly coming,



when the specific work of Local Institutes will become more educational, and when their energies will have to be devoted more and more to the preparation of candidates for the examinations of the Chartered Institute.

One can see in the not distant future a well-defined body of technically trained and efficient employees in our respective Offices upon whom positions of responsibility will be readily bestowed, and in the interests of the business generally, as well as in the interests of the individuals themselves, it will be desirable that Local Institutes should undertake the systematic training of their members. I would say, therefore, to Local Institutes, have your usual syllabus of monthly lectures if you will, but whatever you do, do not omit to include the more important duty of establishing classes for educational purposes.

So many people far more able than I have dealt with the subject of education that I hesitate even to mention it here. But we must not forget what, after all, is the main object of the existence of our Institute, and that is, to raise the standard of our business education.

The acquisition of knowledge is always an aim in itself, and the examinations which we set in this Institute must always have underlying them the idea of ascertaining what is known by a candidate as to facts. A wide and varied knowledge of facts is a very necessary condition in our comprehensive and complex business, and minds which are store-houses of knowledge will always be valuable assets to any Company. It will be the object of this Institute to discover these minds, and by means of our Diplomas to stamp them with the hallmark of attainment, if not of excellence.

There is one aspect of education, however, which I am afraid is very much overlooked in these days, and that is the education of thought. We cram into the minds of our youth a collection of disordered and disorderly facts, and I am afraid little attention is paid as to the assimilation of knowledge, and to the bearing which such assimilation has upon active and correct thinking. This state of affairs may be partly due to the times of rush and stress in which we live,

but I think it is more due to the fault of our educational system, which concerns itself unnecessarily with facts, when resulting theories would be more important.

We want to have men about us who know a great deal, but what we want more are men who are trained, active, and correct thinkers, and, above all, men whose nature, disposition, and training is to get at truth and satisfactory results.

I commend these remarks to the members of the Examiners' Committee so that their papers should not be limited to ascertaining how much candidates know, but should be extended to bring out how far they are original and correct thinkers.

Were all our young men trained on the lines I have indicated, I think we could look forward into the future of our Institute with even higher hopes than we presently hold, and with a confidence that our business, which is second to none in variety, complexity, vitality, and interest, would in time attain to still higher standards.

The past twelve months have been to me as your President, months of sustained interest. I have enjoyed the work, and it has been rendered all the more easy and pleasant by the invariable courtesy and support I have received from all with whom I have been associated, and in this I refer more particularly to the members of your Council. They have smoothed the path, and made the way straight.

I congratulate the Institute on its first year's record as a Chartered body, and I look forward to its history in the future as full of the brightest promises of usefulness and distinction.

I thank you, gentlemen, for your kind attention.

# INSURANCE CLERKS' ORPHANAGE.

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REPORT OF THE GENERAL COMMITTEE TO THE ELEVENTH ANNUAL  
GENERAL MEETING OF MEMBERS, TO BE HELD AT THE  
REGISTERED OFFICE OF THE INSTITUTION, 65 WATLING  
STREET, E.C., ON THURSDAY, THE 12TH DAY OF JUNE,  
1913, AT 5 O'CLOCK P.M.

THE General Committee have pleasure in submitting their Eleventh Annual Report to the members of the Orphanage, together with Account of Income and Expenditure and Balance Sheet for the year ending the 31st March, 1913.

The total income for the year was £3,078 13s. 10d., as against £2,833 16s. 1d. in the previous year.

The expenditure was £1,726 3s. 6d., being £1,572 7s. for grants and £153 16s. 6d. for working expenses. The surplus of the year was £1,352 10s. 4d., against a surplus in the previous year of £1,418 17s. 3d.

In accordance with the Articles of Association, the sum of £865 16s. 4d., being the amount of Life Members' subscriptions, and donations of £20 and upwards, has been added to the Capital Account, bringing it up to £16,487 3s. 11d., and the remainder of the surplus, £486 14s., has increased the Revenue Fund to £7,908 10s. 2d., leaving the Institution with total funds of £24,395 14s. 1d., as compared with £23,043 3s. 9d. at the end of the previous year.

Life Membership subscriptions of £147 were received from 32 new Life Members, and from 13 Annual Members in commutation of their future annual payments. Annual Members' subscriptions amounted to £1,093 18s. 9d., of which £200 15s. 9d. was received from 738 new Members, the balance being renewals.

During the year 770 new Members were admitted, 32 of whom are Life Members, and the total membership stands at 4,004.

The Committee again record their acknowledgment of the material assistance derived from entertainments and other social functions, and their satisfaction at the continued general interest in the Orphanage which they show.

Their thanks are due to those gentlemen whose efforts produced the following results:—

Sheffield—Norfolk Dramatic Society's Production of							
"The Prude's Progress" ... ..					£40	0	0
Newcastle—Institute Whist Drives and Dances:—							
1911 ... ..					£23	16	4
1912 ... ..					15	17	6
						39	13 10
Belfast—Institute Smoking Concert ...					20	0	0
Belfast—Institute Whist Drive and							
Dance ... ..					8	0	5
						28	0 5
London—City of London Amateur							
Orchestral Society's Concerts ...					£21	8	0
					3	12	0
						25	0 0
London—"Northern" Athletic Club's Concert ...					20	4	0
Northampton and Bedford—Institute Dinner and							
Dance ... ..						9	12 3
London—"Commercial Union" Smoking Concert ...					9	0	0
Brighton—Whist Drive and Dance ... ..					8	3	7
Dublin—Institute Smoking Concert ... ..					5	0	0
London—"North British and Mercantile" Whist							
Drive and Dance ... ..						4	16 9
Cardiff—Institute Whist Drive ... ..						4	3 6
London—"Royal Exchange" Golf Tournament ...						3	3 0
Dundee—Institute Smoking Concert ... ..						2	7 6

During the year three Companies were added to the list of Contributors:—London Assurance Corporation, £100; Car and General Insurance Corporation, £50; West of Scotland Insurance Office, £26 5s. The State Assurance Company contributed £50, making a total sum of £200 from that Office, and the City Equitable Fire Insurance Company sent £26 5s., its second donation. The usual Annual Subscriptions were also received from the Clerical, Medical, and General Life Assurance Society, £10 10s.; Equity and Law Life Assurance Society, £10 10s.; General Life Assurance Company, £10 10s.; Phoenix Assurance Company, £10 10s.; Skandinavia Reinsurance Company, £5.

The following is a full list of the Companies which have contributed since the foundation of the Orphanage:—

Alliance Assurance Company ... ..	£200	0	0
Atlas Assurance Company ... ..	200	0	0
British Law Fire Insurance Company ... ..	100	0	0
Caledonian Insurance Company ... ..	200	0	0
Car and General Insurance Corporation ... ..	50	0	0
City Equitable Fire Insurance Company ... ..	52	10	0

Clerical, Medical, and General Life Assurance					
Society (annual) ... ..	£10	10	0		
Commercial Union Assurance Company ... ..	200	0	0		
County Fire Office ... ..	100	0	0		
Eagle Insurance Company ... ..	100	0	0		
Ecclesiastical Insurance Office ... ..	50	0	0		
Employers' Liability Assurance Corporation ...	100	0	0		
Equity and Law Life Assurance Society (annual) ...	10	10	0		
Essex and Suffolk Equitable Fire Insurance Society	26	5	0		
Fine Art and General Insurance Company ... ..	100	0	0		
General Life Assurance Company (annual) ... ..	10	10	0		
Gresham Life Assurance Society ... ..	200	0	0		
Guarantee Society ... ..	25	0	0		
Guardian Assurance Company ... ..	200	0	0		
King Insurance Company ... ..	25	0	0		
Law Guarantee Trust and Accident Society ... ..	100	0	0		
Law Union and Rock Insurance Company ... ..	200	0	0		
Liverpool and London and Globe Insurance Company	200	0	0		
London and Lancashire Fire Insurance Company ...	200	0	0		
London and Lancashire Life and General Assurance Association ... ..	50	0	0		
London Assurance Corporation ... ..	100	0	0		
London Guarantee and Accident Company ... ..	50	0	0		
North British and Mercantile Insurance Company	100	0	0		
Northern Assurance Company ... ..	200	0	0		
Norwich Union Fire Insurance Society ... ..	200	0	0		
Norwich Union Mutual Life Insurance Society ...	150	0	0		
Ocean Accident and Guarantee Corporation ... ..	200	0	0		
Phoenix Assurance Company ... ..	200	0	0		
Phoenix Assurance Company (annual) ... ..	10	10	0		
Provident Life Office ... ..	100	0	0		
Royal Exchange Assurance Corporation ... ..	205	0	0		
Scottish Union and National Insurance Company ...	200	0	0		
Skandinavia Reinsurance Company (annual) ...	5	0	0		
Star Assurance Society ... ..	105	0	0		
State Assurance Company ... ..	200	0	0		
Sun Fire Office ... ..	200	0	0		
Sun Life Assurance Society ... ..	100	0	0		
Union Assurance Society ... ..	100	0	0		
Warsaw Fire Office ... ..	50	0	0		
Westminster Fire Office ... ..	100	0	0		
West of Scotland Insurance Office ... ..	26	5	0		
Yorkshire Insurance Company ... ..	100	0	0		

The sum of £1,694 11s. 5d. was invested during the year, making the total investments of the Orphanage at cost £23,930 10s. 5d., as against a market value, on 31st March, 1913, of £21,423.

During the year 14 new cases were admitted and 5 retired upon attaining the age limit, making the total number up to 63

children, for whom on the 31st March the General Committee were making grants at the rate of £1,583 12s. per annum for maintenance and education. A short summary of the cases is appended.

The General Committee tender their hearty thanks to the members of the respective Local Committees, the Office Representatives, the gentlemen who kindly supervise the administration of the grants, the Honorary Auditors, the Committee of the London Salvage Corps for the free use of their premises, and to the Insurance Press for gratuitous advertisements and appreciative notices of the Orphanage.

The following gentlemen retire in accordance with the Articles of Association, and, being eligible, offer themselves for re-election, viz. :—Messrs. R. B. Lemon, A. Mackay, C. E. Noverre, and E. Roger Owen, Sir David Paulin, Messrs. W. P. Phelps, and W. N. Whympers.

The retiring Auditors, Messrs. Price, Waterhouse & Co., have again kindly offered their services without fee, and will be submitted for re-election.

The Committee beg to call attention to a forthcoming book, entitled "Odds and Ends of Foreign Travel," by Mr. George C. Morant, late of the "Commercial Union," the profits of which he has kindly promised to give to the funds of the Orphanage. It is hoped that appreciation of his generous act will be shown by a large sale.

SAML. J. PIPKIN, *Chairman.*

20th May, 1913.



THE FOLLOWING STATEMENT SHOWS THE PROGRESS OF THE ORPHANAGE:—

Year ending 31st March.	Number of Members.	SUBSCRIPTIONS AND DONATIONS, &c.						Total of all Income.	EXPENDITURE.		Balance at end of each year—Cap- ital and Revenue.	Number of Children Benefiting at 31st March
		Life Members.	Donations of £20 and upwards.	Total to Capital.	Annual Members.	Donations under £20 and Sub- scriptions.	Interest.		Grants.	Working Expenses.		
		£	£	£	£	£	£	£	£	£	£	
1903	2,007	3,412	1,009	4,421	629	411	24	5,486	8	221	5,256	1
1904	2,304	531	922	1,453	683	169	138	2,443	72	125	7,503	3
1905	2,527	143	438	581	719	139	205	1,645	118	145	8,885	6
1906	2,604	166	523	689	771	209	266	1,935	219	43	10,557	14
1907	2,626	75	862	937	746	272	355	2,311	528	97	12,243	24
1908	2,733	93	715	808	877	341	376	2,402	667	115	13,863	29
1909	2,742	50	581	632	830	314	413	2,189	807	92	15,153	32
1910	2,843	71	1,102	1,173	827	329	477	2,807	912	99	16,948	40
1911	3,158	220	3,820	4,041	888	331	586	5,847	1,066	105	21,624	45
1912	3,380	106	778	884	917	315	718	2,834	1,240	174	23,043	54
1913	4,004	147	719	866	1,094	341	778	3,079	1,572	154	24,396	63

# INSURANCE CLERKS' ORPHANAGE.

## INCOME and EXPENDITURE ACCOUNT for the Year ending 31st MARCH, 1913.

INCOME.		EXPENDITURE.	
To Balance brought forward from last Account ... ..	£147 0 0	By Transfer to General Capital Account in accordance with the Articles of Association of the Orphanage ... ..	£865 16 4
„ Subscriptions from Life Members	466 6 4	„ Working Expenses, Stationery, Printing, Postages and Petties, &c. ... ..	153 16 6
„ Donations from Insurance Companies .. ..	252 10 0	„ Grants ... ..	1,572 7 0
„ Annual Subscriptions from Members	£1093 18 9	„ Balance carried to Balance Sheet ... ..	7,908 10 2
„ Donations under £20 .. ..	341 3 11		
„ Interest on Investments .. ..	777 14 10		
	<u>2,212 17 6</u>		
	<u>£10,500 10 0</u>		<u>£10,500 10 0</u>

## BALANCE SHEET, 31st MARCH, 1913.

To General Capital Account as at 31st March, 1912		..£15,621 7 7	
Add Amount received during the Year, being Life Subscriptions, and Donations of £20 and upwards		865 16 4	
.. Balance of Income and Expenditure Account..		£16,487 3 11 7,908 10 2	
By: Investments at cost.—			
£5,500 2½ per Cent. Consols	£5,055 7 5		
£1,200 Birmingham Corporation 3 per Cent. Stock	1,161 14 3		
£500 London County 3½ per Cent. Consolidated Stock	465 7 3		
£500 Middlesex County 3½ per Cent. Stock, 1927-1947	485 1 0		
£500 Swansea Corporation 3½ per Cent. Stock, 1930-1970	483 3 6		
£1,000 Metropolitan Water (B) Stock, 1934	865 2 0		
£800 Canada 3½ per Cent. Stock, 1930-1950	789 11 0		
£1,500 Cape 3½ per Cent. Inscribed Stock	1,436 8 0		
£1,300 Natal 3½ per Cent. Consolidated Stock	1,263 2 0		
£500 New South Wales 3½ per Cent. 1918 Stock	481 18 6		
£500 New South Wales 3½ per Cent. New Inscribed Stock, 1930-1930	498 3 6		
£500 South Australian 3½ per Cent. Stock, 1926-1936	484 8 6		
£500 South Australian 3½ per Cent. Inscribed Stock	501 19 6		
£500 Victoria 4 per Cent. Inscribed Stock, 1920	512 12 0		
£1,000 Great Central and Midland 3½ per Cent. Guaranteed Stock	1,003 19 7		
£1,000 Great Western and Great Central 3½ per Cent. Guaranteed Stock	988 17 8		
£1,000 Great Western Railway 5 per Cent. Consolidated Preference Stock	1,363 6 0		
£1,000 London, Brighton and South Coast Railway 5 per Cent. Consolidated Preference Stock	1,360 15 8		
£1,000 North-Eastern Railway 3 per Cent. Debenture Stock	900 4 3		
£1,000 North Staffordshire Railway 3 per Cent. Preference Stock	764 10 2		
£1,000 East Indian Railway 3½ per Cent. Debenture Stock, 1937	953 7 3		
£500 Great Indian Peninsula 3½ per Cent. Debenture Stock	465 14 3		
£70 Annuity, Class "B," East Indian Railway, 1953	1,670 17 2		
Cash at Bank, Current Account	£23,930 10 5		
" Cash in hand	£462 0 6		
	3 3 2		
	465 3 8		
	£24,395 14 1		

**AUDITORS' CERTIFICATE AND REPORT.**—We report to the members that we have examined the above Account of Income and Expenditure for the year ending 31st March, 1913, and the Balance Sheet as at that date, with the books and vouchers of the Institution, and having obtained all the information and explanations we have required, we are of opinion that such Balance Sheet is properly drawn up so as to exhibit a true and correct view of the state of the Institution's affairs according to the best of our information and the explanations given to us and as shown by the books.

We have verified the Investments appearing in the Balance Sheet.

3 FREDERICK'S PLACE, OLD JEWRY, E.C.,  
14th May, 1913.

PRICE, WATERHOUSE &amp; CO., Auditors.

PARTICULARS OF CASES RECEIVING THE BENEFITS OF THE ORPHANAGE ON 31st MARCH, 1913.

Admitted.	Sex.	Born.	Father.
June 8th, 1904 ...	Boy	May 13th, 1898	Clerk, Westminster Fire, London.
November 8th, 1905 ...	Girl	September 7th, 1898	Clerk, Norwich Union Life, Bristol.
December 13th, 1905 ...	Boy	November 16th, 1898	Inspector, County Fire, London.
December 13th, 1905 ...	Boy	February 6th, 1899	Clerk, Alliance Marine, Liverpool.
December 13th, 1905 ...	Boy	August 27th, 1897	Clerk, Alliance Marine, Liverpool.
March 14th, 1906 ...	Boy	January 30th, 1900	Inspector, County Fire, London.
May 9th, 1906 ...	Boy	September 15th, 1898	Clerk, Plate Glass Insurance Co., London.
May 9th, 1906 ...	Boy	January 6th, 1900	Clerk, Sun Fire, London.
November 14th, 1906	Girl	July 28th, 1899	Local Secretary, Gresham Life, Liverpool.
November 14th, 1906	Girl	November 11th, 1900	Local Secretary, Gresham Life, Liverpool.
March 20th, 1907 ...	Boy	November 29th, 1899	District Manager, State, Leeds.
April 24th, 1907 ...	Boy	March 13th, 1901	Clerk, County Fire, London.
June 17th, 1907 ...	Boy	May 31st, 1901	Clerk, Westminster Fire, London.
July 25th, 1907 ...	Girl	June 29th, 1900	Claims Assessor, United Legal Indemnity, London.
September 26th, 1907	Boy	February 14th, 1899	Clerk, Gresham Life, London.
September 27th, 1907	Girl	April 18th, 1898	Surveyor, Atlas, Manchester.
November 27th, 1907	Girl	September 30th, 1901	Clerk, Phoenix, London.
February 19th, 1908 ...	Boy	June 30th, 1901	Branch Manager, Commercial Union.
June 25th, 1908 ...	Boy	March 11th, 1901	Clerk, British & Foreign Marine, Liverpool.
June 25th, 1908 ...	Girl	November 2nd, 1897	Surveyor, Yorkshire, Glasgow.
June 25th, 1908 ...	Girl	July 22nd, 1901	Surveyor, Yorkshire, Glasgow.
April 21st, 1909 ...	Girl	August 30th, 1902	Clerk, Norwich Union Life, Bristol.
October 6th, 1909	Girl	November 3rd, 1898	Accountant, Commercial Union, London.
October 6th, 1909	Girl	August 14th, 1903	Local Manager, Commercial Union, Belfast.
October 6th, 1909	Boy	October 27th, 1898	Surveyor, County Fire, London.
October 6th, 1909	Boy	March 12th, 1903	Clerk, London and Lancashire Fire, Liverpool.
November 17th, 1909	Girl	August 2nd, 1903	Accountant, Norwich Union Fire, Norwich.
November 17th, 1909	Girl	July 19th, 1902	Claims Assessor, United Legal Indemnity, London.
November 17th, 1909	Girl	November 13th, 1903	Branch Manager, Economic, Birmingham.
April 20th, 1910 ...	Boy	March 18th, 1902	Branch Manager, Economic, Birmingham.
April 20th, 1910 ...	Boy	May 31st, 1903	Assistant Surveyor, County Fire, London.
July 13th, 1910 ...	Girl	June 29th, 1904	Clerk, General Life, London.
September 14th, 1910	Boy	July 18th, 1901	

PARTICULARS OF CASES RECEIVING THE BENEFITS OF THE ORPHANAGE ON 31<sup>ST</sup> MARCH, 1913.—Continued.

Admitted.	Sex.	Born.	Father.
September 14th, 1910 ..	Boy	October 4th, 1903 ..	Clerk, General Life, London.
October 19th, 1910 ..	Girl	August 27th, 1899 ..	Clerk, Norwich Union Fire, Norwich.
February 21st, 1911 ..	Boy	August 11th, 1903 ..	Clerk, Westminster, London.
April 27th, 1911 ..	Boy	December 29th, 1901 ..	Branch Manager, North British and Mercantile, Northampton.
April 27th, 1911 ..	Girl	July 24th, 1904 ..	Chief Clerk, Foreign Department, Law Union and Rock, London.
April 27th, 1911 ..	Girl	February 2nd, 1905 ..	Clerk, Norwich Union Life, Bristol.
June 28th, 1911 ..	Boy	April 25th, 1905 ..	Clerk, County Fire, London.
September 28th, 1911 ..	Boy	May 9th, 1905... ..	Accountant, Commercial Union, London.
September 28th, 1911 ..	Girl	August 1st, 1905 ..	Inspector, North British and Mercantile, Manchester.
September 28th, 1911 ..	Boy	August 11th, 1905 ..	Clerk, Northern, London.
October 26th, 1911 ..	Boy	June 19th, 1903 ..	Clerk, Plate Glass Insurance Co., London.
December 7th, 1911 ..	Boy	March 23rd, 1902 ..	Clerk, Thames and Mersey Marine, Liverpool.
December 7th, 1911 ..	Girl	December 8th, 1904 ..	Clerk, Thames and Mersey Marine, Liverpool.
January 31st, 1912 ..	Girl	May 5th, 1902 ..	Inspector, Scottish Provident, Liverpool.
January 31st, 1912 ..	Girl	January 29th, 1904 ..	Inspector, Scottish Provident, Liverpool.
March 27th, 1912 ..	Boy	May 20th, 1900 ..	Clerk, Alliance Marine, Liverpool.
May 29th, 1912 ..	Girl	March 22nd, 1905 ..	Fire Superintendent, Commercial Union (Hand-in-Hand), London.
May 29th, 1912 ..	Girl	April 6th, 1906 ..	Chief Accountant, Norwich Union Fire, Norwich.
June 26th, 1912 ..	Boy	April 22nd 1906 ..	Inspector, London and Lancashire Fire, Liverpool.
June 26th, 1912 ..	Boy	July 10th, 1905 ..	Claims Assessor, United Legal Indemnity, London.
July 31st, 1912 ..	Girl	March 22nd, 1901 ..	Town Fire Superintendent, Guardian, London.
September 26th, 1912 ..	Boy	September 27th, 1901 ..	Inspector, Atlas, London.
September 26th, 1912 ..	Boy	March 23rd, 1903 ..	Inspector, Atlas, Liverpool.
September 26th, 1912 ..	Girl	May 6th, 1905 ..	Inspector, Atlas, Liverpool.
October 31st, 1912 ..	Boy	May 8th, 1900 ..	Clerk, North British and Mercantile, London.
October 31st, 1912 ..	Girl	October 15th, 1898 ..	Clerk, North British and Mercantile, London.
November 28th, 1912 ..	Girl	September 2nd, 1903 ..	Joint Branch Manager, Atlas, Glasgow.
November 28th, 1912 ..	Girl	October 28th, 1906 ..	Joint Branch Manager, Atlas, Glasgow.
February 27th, 1913 ..	Girl	January 13th, 1907 ..	Branch Manager, Economic Life, Birmingham.
March 27th, 1913 ..	Boy	July 20th, 1902 ..	Agency Superintendent, Star Life, London.





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\*<sup>\*</sup> *For all statements made, and opinions expressed,  
in the papers of this volume, the respective  
writers are alone responsible.*



# BONDS OF CAUTION TO EXECUTORS DATIVE AND OTHER BONDS OF THE SCOTTISH COURTS.

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By ROBERT MACKAY, Esq., F.F.A.,  
Secretary, Northern Assurance Coy., Ltd.

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*A Paper read before the Insurance Institute of Aberdeen,  
12th February, 1913.*

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WHEN our President honoured me with an invitation to contribute a paper to the proceedings of this Session of our Institute, it occurred to me that a few remarks on Bonds of Caution to Executors Dative and other Bonds of the Scottish Courts might be of some interest to the Members—not that the subject is of much importance to us in our daily work, but rather that no paper dealing with it has, so far as I am aware, been submitted to a local Institute, so that students may be presumed (I refer, of course, to the junior members) to possess little or no knowledge of the general conditions and principles governing the transaction of this class of Fidelity business. Moreover, the issue of such Bonds by Insurance Companies is becoming more and more general, and the subject, in consequence, has an ever-growing importance for us. I would ask the indulgence of the senior members if my remarks appear to them of a somewhat elementary nature—as a mere layman I am compelled to walk warily and to confine myself to the broader aspects of the subject, leaving those who may be interested in the gathering of further knowledge to consult the various legal Text Books.

When a man dies, his personal estate (as distinguished from heritable property) falls to be administered by his legal representatives, who are known as his Executors. These may be Executors Nominate, *i.e.*, the Executors nominated in the deceased's will, or Executors Dative, the class now under our

consideration. If a man at his death leaves no will, or the Executors named in his will have died, or decline to act, or if no Executors be named, it falls to the Sheriff to appoint on petition one or more of the parties interested in the estate to administer it as Executors Dative, the Executors being styled Executors Dative from the fact that their appointment is given or conferred by the Sheriff. In England the corresponding term is Administrators, the word Executors being reserved for the Executors nominated in a man's will, and for these alone. The procedure to be followed in submitting a petition for appointment as Executor Dative and obtaining decree from the Sheriff is regulated by the Confirmation and Probate Act, 1858. The petition must be lodged with the Sheriff Clerk of the County in which the deceased died domiciled, or if his domicile be out of Scotland, or in Scotland but the precise place undeterminable, to the Commissary Clerk of Edinburgh, such petition being duly advertised in the manner set forth in the said Act. You will observe that the domicile of a deceased person determines the Court in Scotland by which Confirmation may be granted; it also determines the persons in whose favour confirmation is issued. Thus the question of domicile is of great importance, since the succession to personal estate is regulated exclusively by the law of the particular country in which the deceased died domiciled, without any reference to the place where the personal estate may be actually situated. To give a precise definition of the word domicile, in the legal sense, is difficult—broadly, it is the home which a man derives from his parents or chooses for himself, *i.e.*, it may be the domicile of origin or an acquired domicile. Take the case of a person dying intestate, domiciled in England, and leaving personal estate situated in Scotland. The succession would be in accordance with English law, and Confirmation would accordingly be granted by the Scottish Courts to the person or persons whom the Courts of the deceased's domicile would recognise as entitled to administer the estate in their jurisdiction, who may be different from those entitled by Scotch law, since the law of England differs widely from that of Scotland, both as regards testate and intestate succession.

Any person having right to a share of the deceased's personal estate may apply to the Sheriff for decerniture as Executor Dative, and, in case of competition for the office, applicants

are preferred in a certain order, all applicants having an equal right in the order of preference being entitled to be conjoined. The following persons may, in their order, failing an Executor Nominate, apply to be decerned Executor Dative:—(1) the next of kin, taking a beneficial interest in the succession; (2) the relict; (3) creditors of the deceased; (4) a legatee. If the next of kin has no beneficial interest in the estate, his right to Confirmation is postponed to that of any one who has, but he is entitled to Confirmation in the absence of a claimant having a better title. The next of kin, it may be well to state, are those, not necessarily the nearest in blood, who in their order would be entitled, by the common law of Scotland, to succeed to the personal estate of a deceased intestate. They are—(1) children and their descendants; (2) brothers and sisters german (*i.e.*, of the full blood), and their descendants; (3) brothers and sisters consanguinean (*i.e.*, by the same father), and their descendants; (4) the father; (5) brothers and sisters german of the father, and their descendants; (6) brothers and sisters consanguinean of the father, and their descendants; (7) the grandfather, whom failing, the collaterals in the same order as those of the father. There is in Scotland no succession through the mother, so that brothers and sisters by the same mother but by different fathers are not in law kin to each other at all. In practice the beneficial interest conferred upon the father of a deceased person by the Intestate Moveable Succession Act, 1855, has been held to entitle him to the office of Executor Dative. Similarly, the mother, or brothers and sisters uterine (*i.e.*, by the same mother), may claim the office by reason of the beneficial interests which they take under the said Act, and will be entitled to Confirmation in the absence of any one having a better title. In this connection it should be remembered also that the Intestate Husband's Estate (Scotland) Act, 1911, gives the widow of an intestate dying without issue the whole estate if under £500, and a first charge to that amount if over £500. Should there be no claimant for the office, an ordinary creditor of the deceased may be decerned Executor, and the Confirmation in his favour may be for the whole estate, or it may be limited to the amount of his debt. Further, the creditors of the next of kin may, in certain circumstances, apply for the appointment. It sometimes happens that those entitled to apply are pupils

or minors without any legal guardian, in which case a factor is commonly appointed by the Sheriff to act for them, the factor being thereafter decerned and confirmed as Executor Dative *qua* factor.

It was at one time the practice to insist on caution being found by all Executors, whether Nominate or Dative, to the full amount of the estate, but in 1823 it was enacted that caution should not be required from Executors Nominate, and that in the case of Executors Dative the Sheriff should fix the amount for which caution should be found, not exceeding the amount of the estate contained in the inventory submitted—it may be less, but cannot be more. In passing, it may be remarked that in England the Administrator, who is the functionary corresponding to our Executor Dative, is required to provide caution for double the amount of the estate. It is therefore necessary for the Executor Dative to lodge with his application for Confirmation, an inventory of the whole movable estate of which the intestate died possessed, and to find caution for his dealings therewith before being confirmed, the Cautioner binding himself, his heirs, and successors, that the estate detailed in the inventory shall be made free and forthcoming to all parties entitled thereto according to law. Where restriction of caution is desired, as sometimes happens, to a sum less than the value of the estate, a special petition must be submitted to the Sheriff stating the grounds on which the demand for restricted caution is founded. For example, the estate may be large, and the petitioners may be the next of kin and sole beneficiaries. In these circumstances, the petitioners, being the only persons interested in the realisation and distribution of the estate, the submission of caution is largely formal, and the amount of the Bond may be restricted to a nominal sum dependent upon the debts due out of the estate. But caution can never be wholly waived.

Cautioners must be resident in Scotland or otherwise subject to the jurisdiction of its Courts. They must not be beneficially interested in the succession, the argument being that a Cautioner who has no interest save to see that all possible claims are satisfied affords the best guarantee that the functions of the Executorial office will be faithfully performed. Two or more Cautioners may be conjoined in the Bond, but they are taken bound jointly and severally, and each is attested as good



for the whole obligation. Or the Bond of an approved Public Company subject to the jurisdiction of the Scottish Courts may be accepted in place of the Bond of a private surety.

A stamp duty of 5/- must be impressed upon the Bond where the amount of the estate exceeds £100 in value, the stamp being dependent on the value of the estate confirmed to and not on the amount of the caution.

The septennial prescription does not apply to Bonds of Caution for Executors Dative—that is, the Bond does not expire by the lapse of seven years.

On obtaining confirmation, the Executor Dative is entitled to administer the estate of the deceased. His position is radically different from that of a Trustee, whose duty it is to hold and administer the estate of a defunct in accordance with the purposes of his trust. The sole duty of an Executor Dative is to ingather and realise the estate as set forth in the inventory in order that he may distribute it amongst those entitled thereto. Should he fail to exercise due diligence in this, he may be held responsible for outstanding debts due to the estate. He is entitled to a reasonable time to realise investments and to dispose of a going business to the best advantage, but if he carries on the business he is liable for the administration thereof to the beneficiaries, who cannot, however, claim more than the value of the business as given up in the inventory of the estate. All debts should be settled by the Executor Dative before he distributes any part of the estate. It is, therefore, desirable to make full inquiry, by advertisement or otherwise, for claims against the deceased, but the Executor is not bound to make any payment until the lapse of six months. If he makes any payments during that period, excepting certain privileged debts, he runs the risk of personal liability in the event of the estate turning out to be insufficient to meet the claims upon it. This waiting period of six months is intended to afford creditors an opportunity of producing their claims, and any creditors coming forward after an orderly division of the estate by the Executor Dative must look for payment, not to the Executor Dative, who has honestly and in good faith handed over the funds to those entitled, but to the beneficiaries themselves. All known debts should be provided for before any portion of the estate is distributed, and no distribution should be made before the expiry of six months;

otherwise, as indicated, a personal liability may attach to the Executor.

Let us now consider some of the risks attaching to the issue of such Bonds by Public Companies. The eligibility of any particular application for caution may be said to depend, to a large extent, upon the replies made to the following queries contained in some of the ordinary forms of proposal in use:—

- (1) Is there a business to be carried on? Is it intended to be sold as a going concern?
- (2) Who are the beneficiaries? Are they all of age? If not, specify which of them are under age, and state how it is proposed to deal with their shares.
- (3) Who are the law agents administering the estate? Will you undertake to obtain discharges from the beneficiaries through them, and exhibit the same to the Company?

It sometimes happens that the Executor intends to carry on a business, or to manage a farm, in the supposed interests of the various beneficiaries for a period, more or less indefinite, and in such circumstances declinature of the application would seem to be the wise course, as awkward questions might arise were the results of the Executor's trading to prove unsuccessful, since, as we have seen, it is the duty of the Executor Dative to realise and distribute the estate with all due diligence. The cautioners in such a case would, in effect, be guaranteeing the successful management of a business, and the imprudence of this will be obvious. Occasionally, however, it is possible to come to an arrangement whereby the caution may safely be granted, notwithstanding the fact that the Executor wishes to carry on a business. For example, the various beneficiaries, supposing they are all of full age, may agree to grant discharges to the Executor for their respective shares in the estate, and to take in exchange acknowledgments of indebtedness of corresponding amount from the Executor as an individual, the circumstances being narrated in a Deed of Discharge. The Executry being thus wound up and the Executor discharged of his actings, all objectionable features disappear, and the caution may readily be granted. But it is seldom that this serious element of risk can be eliminated in a manner so simple. There may be minor beneficiaries without any legal guardian, whose existence may render the adoption of such a course

impracticable, or the beneficiaries themselves may not be willing to consent to the arrangement. Sometimes the risk attaching to the carrying on of a business takes another form. The Executor Dative may be beneficially interested in the estate, and may propose to appropriate a business, carried on by the deceased, at the value put upon it in the inventory, in full or part payment of his own share, the remainder of the assets being distributed amongst the other beneficiaries. Such a proceeding is, strictly speaking, irregular. It is the duty of the Executor to realise the estate for what it will fetch in the market, and the value put upon a business for inventory purposes, since nothing is usually included in respect of "goodwill," must, as a rule, be regarded as a low estimate. But if all the beneficiaries, being major, agree to a division on the footing indicated, there is nothing to be said against the procedure, only in such circumstances the Cautioner would require to see to it, before granting caution, that a satisfactory agreement in writing had been entered into by all persons interested. Should there be minor beneficiaries, it is possible that trouble may arise later on. These minors, on reaching majority, may question the actings of the Executor, and urge that it was his duty to sell the business, after the deceased's death, for what it would fetch; that the value placed upon it in the inventory was too low, and that their interests in the estate were prejudiced thereby. The possibility of questions of this nature arising may be somewhat remote, but the element of risk exists and should not be overlooked. However desirable it may be, and often is, for an Executor Dative to maintain a business in the supposed interests of the beneficiaries, or to take it over at inventory value, it cannot be denied that in doing so he commits an irregularity and may incur a personal liability to the prejudice of his Cautioner.

Sometimes it may not be possible to trace certain of the beneficiaries who may have gone abroad and whose present whereabouts may be unknown. In such circumstances, their shares should be invested in the joint names of the Executor and the Cautioner pending further inquiry, which, if fruitless, usually leads to an application to the Court to have their deaths presumed and a division of their shares made amongst the remaining beneficiaries.

The existence of minor beneficiaries without any legal

guardian is often a source of embarrassment affecting the eligibility of the risk. If it be possible, as it frequently is, to arrange for the placing of Minors' shares in an approved investment in the joint names of the Executor Dative and the Cautioner, until those interested attain majority, the desired caution may be granted, discharges being got from the younger beneficiaries on their coming of age. But this procedure is not always practicable. The estate may be small. The widow of the deceased may be Executrix Dative, and there may be a young family to maintain and educate. Here the element of risk is apparent, and a Public Company, having no control over the actings of the Executrix, would not be justified in ordinary circumstances in guaranteeing her intromissions with the estate. Sometimes the Executor Dative may also occupy the position of factor for minor children, duly appointed as such by the Court, a circumstance that entirely changes the aspect of the case, and if he be a respectable and trustworthy person, no special risk would apparently attach to the issue of caution. As factor, his estate accounts would be audited yearly by the Accountant of Court, who would also supervise his dealings with the funds.

Perhaps a few words explanatory of the legal position of pupils and minor children may be of interest here. A pupil is at law incapable of acting in or consenting to any transaction affecting his interests, all deeds being executed by his tutor or guardian without the pupil appearing even as consenting—the father, whom failing, the mother, is tutor and administrator in law to pupil children. A minor, on the other hand, can act with the consent of his curator, the latter advising and consenting, but the minor being the principal agent. The father is at law curator to his minor children—should he be dead, the mother's rights only extend to those children who may still be in pupilarity.

Where the estate is really realisable and the beneficiaries are all major, a speedy realisation and distribution may be anticipated, and a case of this kind may, from the Cautioner's point of view, be regarded as the normal risk. Not infrequently, the Executor Dative is himself the sole beneficiary, in which event the case may be treated as a "gilt edged" one of the class, eligible at the minimum rate of premium. For in such circumstances the Cautioner is asked to guarantee the intro-



missions of the Executor Dative with his own funds. The element of risk seems non-existent, apart from the possibility that the Executor, in a moment of temptation, may realise the estate and flee the country, leaving the unfortunate Cautioner to pay the debts of the defunct!

A very important point to the Cautioner, perhaps the most important of all, is the standing and professional reputation of the law agent administering the estate. The Cautioner should be satisfied that he is honourable and reliable, and it is a good rule to require the Executor Dative to give an undertaking to leave the winding up of the Executry in his hands, and to obtain discharges from the various beneficiaries through him, and exhibit them to the Company. Otherwise the Cautioner can have no certainty that the risk will be formally brought to an end in due course and the Executor discharged of his actings. With a responsible law agent handling the estate, fully cognisant of all the legal claims upon it that may emerge, and willing to recognise and satisfy them, the interests of both Cautioner and beneficiaries are fully protected, and the issue of Bonds of Caution to Executors Dative by Public Companies thereby placed on a proper and business-like footing. Indeed, if these conditions be fulfilled, the Bond becomes, in effect, a guarantee for the faithful administration of the estate by the law agents employed—a risk capable of measurement on the principles adopted in the transaction of ordinary Fidelity business.

Bonds of Caution to Executors Dative are usually issued on payment of a single premium ranging (in normal circumstances) from 2/6 per cent. to 10/- per cent. on the amount of the Bond, the rate charged being mainly dependent on (a) the probable duration of the administration, (b) the actual sum at risk, since in many cases the Executor is himself the principal (sometimes the sole) beneficiary, in which event the risk to the Cautioner (apart from debts) would be in respect of that part of the estate to be distributed amongst the other beneficiaries. The rates prevailing in Scotland cannot be regarded as excessive—in comparison with the rates ruling in England they appear low, the more especially when it is borne in mind that in England the amount of the caution is fixed at double the value of the deceased's estate, a feature productive of a much larger premium to the Cautioner, with little or no real increase in his liability. To issue such Bonds at a yearly premium

appears undesirable, although in practice it is apparently sometimes done, the Executor in such a case agreeing, by a Back Letter or other document duly stamped, to make payment of a yearly premium during the currency of the risk. For if the realisation and distribution of the estate is likely to extend over a period of years, that feature alone would in ordinary circumstances be sufficient to mark the case as undesirable. Moreover, the Bond in its terms is unconditional, no premium, single or annual, being mentioned in it, and once granted it cannot be recalled. That the premium, therefore, should take the form of a single payment seems appropriate in the circumstances of the case.

The other Bonds of Caution issued to the Scottish Courts, such as those to Trustees in Bankruptcy, Liquidators of Public Companies in a judicial winding up, and Judicial Factors, do not seem to call for more than a few remarks explanatory of the circumstances under which they take their origin.

The Trustee in Bankruptcy in a Sequestration or *Cessio Bonorum* is usually a professional man of good standing, an accountant or a law agent, to whom the whole property of the bankrupt is transferred for realisation and distribution amongst the creditors. The Act and Warrant of Confirmation issued by the Sheriff to the Trustee is the document constituting his title in a Sequestration. Should the procedure take the form of *Cessio Bonorum* (a minor process for the distribution of a bankrupt's estate and appropriate to estates of small amount), the Trustee's title is proved by the Extract Decree of *Cessio* issued by the Sheriff. As a rule, the currency of such Bonds is comparatively brief, dependent upon the magnitude and character of the estate to be wound up; and the Bond, being unconditional and irrevocable in its terms, is usually issued on payment of a single premium, frequently 5/- per cent. While the actings of the Trustee are subject to the supervision of the Court, he naturally possesses wide powers in his dealings with the estate, so that the features claiming primary consideration in dealing with a Bond of this class are—

- (a) the professional reputation and standing of the Trustee;
- (b) the probable duration of the realisation and distribution of the estate.

A Liquidator is an officer appointed to conduct the winding up of a Public Company—which may take the form of a



voluntary or a judicial winding up—the Liquidator, in the latter case, being appointed by the Court and taking his title from an order of the Court containing his appointment. Here, the Bond is subject to the payment of a yearly premium, as the Cautioner may withdraw on due notice being given to the Accountant of Court. Bonds of Caution of this class are not very common, since the liquidation of a Public Company more frequently takes the form of a voluntary winding up, with which the Court has, of course, nothing to do, unless the winding up be carried out, as is sometimes the case, under the Court's supervision.

A Judicial Factor is an administrator appointed by the Court of Session or Sheriff Court, to whose care, under the supervision of the Court, are entrusted estates and interests without a capable owner or administrator, or which are matter of litigation. The factor must find caution before he can extract his appointment and carry on his duties, his title being proved by the Extract Decree of the Court. Sheriff Court appointments relate only to small estates—generally speaking, a Judicial Factor may be appointed by the Sheriff to act *loco tutoris* or as *Curator Bonis* upon estates which do not exceed £100 in yearly value. The circumstances under which these appointments are made may be briefly reviewed. A father may die without a settlement, leaving a child in pupilarity who has no other legal guardian, in which case the factor is called a factor *loco tutoris*. Or a person resident abroad may succeed to estate in Scotland and a factor may be required to act for him who is called a factor *loco absentis*. Again, the factor may be appointed to manage the affairs of a person who has become incapable of doing so by reason of old age, mental incapacity, or other infirmity, or to manage the property of a minor, above pupilarity, in place of a Common Law Curator, when the factor is styled a *Curator Bonis*. Sometimes it happens that the Trustees named by a person deceased have declined to accept, or have died, or become incapable of acting, in which case the factor appointed is called a Judicial Factor.

The Factor or Curator Bonis is usually a law agent or accountant, and his ordinary powers and duties are regulated by various statutes. By the Judicial Factors (Scotland) Act, 1889, the Accountant of Court is entrusted with the superintendence of all Judicial Factors appointed either in the Court

of Session or in the Sheriff Court. Should the factor act beyond his ordinary statutory powers without special authority from the Court, he does so at his own risk. The factor's accounts are closed yearly, and submitted for audit to the Accountant of Court, who may make such requisitions upon them as he thinks necessary. Bonds of Caution to Judicial Factors, unless the Bond bears to be for a specified period, may be withdrawn, on due notice being given to the Accountant of Court—hence they are appropriately issued by Public Companies at a yearly premium, the rate commonly charged being  $\frac{2}{6}$  per cent.

Bonds such as those described to Trustees in Bankruptcy, Public Liquidators, and Judicial Factors are probably regarded, and rightly so, as offering to a Public Company, in its capacity as Cautioner, very desirable subjects for Fidelity Guarantee in that the officials appointed to administer the estates are usually professional men of good standing and reputation. This feature, indeed, is given marked effect to in the very low rates of premium at which the Bonds are issued. Nevertheless, it is well to remember that a Company does not occupy such a favourable position in relation to the person guaranteed by these Bonds as it holds in regard to its insured under an ordinary commercial Bond of Fidelity Guarantee. Bonds of the latter class evidence an agreement between the insured and the Company that the liability of the latter is conditional upon the maintenance of an approved method of audit, accounting, and check—that is to say, the Company exercises a certain control upon the actings of the insured. But all Bonds of Caution to the Scottish Courts are issued free of conditions, the official guaranteed being at liberty to deal with the estate as he chooses, subject to Rules of Court, and however lax the authorities concerned may be in supervising the actings of the official and examining his accounts, the Cautioner would not on that ground escape liability. Therefore, viewed from this standpoint, the conditions are less favourable to the Cautioner than those prevailing in connection with ordinary commercial Bonds of Fidelity Guarantee where the actings of the insured, in terms of the Bond, are not only subject to an independent yearly or half-yearly audit, but are also carried out according to a system of accounting and check approved by the Cautioner, and operating at regular intervals throughout the year.

# INSURANCE : THE OFFICES, THE STATE, AND THE COMMUNITY.

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IN surveying the course of human history, it appears possible to divide the various events into two great groups—in the first place, those which, generally following in some more or less regular sequence, seem to have about them, on looking back, a sort of inevitableness, as though it should always have been obvious that these particular happenings would take place; and, secondly, those events which, however largely they may have loomed in contemporary eyes, were but adventitious, and incapable of influencing powerfully the affairs of succeeding generations. It is as though one were to contemplate the flow of a river through a virgin country: the current would set first in one direction and then in another; now running swiftly and again sluggishly: sometimes the stream would be compact and at others it would be weakened by drainage into marshes; still through it all could be discerned the operation of a deeper law, that of gravitation, leading steadily to a lower level, and ultimately the sea.

In history there are comparatively few genuine records of prophetic utterances based on sound reasoning from the past to the future—such, for example, as that by the Rev. Sidney Smith anent the consequences of the French Revolution in particular, and thus we are led to conclude that man has not hitherto shown great foresight in the management of his affairs, an impression which is strengthened by a consideration of the stupendous waste of energy on trivial or inadequate objects, in the shape of wars and legislation. And reverting

to the simile of a stream: supposing the drops of water to be men, possessing some independent powers of volition, with the route to the sea as the utmost desirable, it is not difficult to classify the traditional types of mankind. The dull, the ignorant, guided or buffeted by stronger neighbours, will but add to the general momentum of their immediate surroundings, right or wrong, and with them may be placed the indifferent; the energetic, aggressive, and truculent will make much stir and cause many eddies, but, if unaided by knowledge, will tend in the long run to paralyse each other's efforts: they provide most of the adventitious happenings of history. Then the fanatics play a part; they exaggerate the force of every crisis and every change in the current brings them temporarily to the front. The opportunist will be always in the van; whether the particular section of the stream in which he finds himself be going on the right road or slipping aside to waste in the marshes, he will be leading. He will often do well in this way, but a seductive side issue will frequently be his undoing. But the majority will jog along, and few there will be who are sufficiently gifted to glimpse even dimly the great underlying laws of progress. The general standpoint appears to be, not so much that what is to be will be, as that what is will continue to be. Observing, more or less consciously and intelligently, the wonderful continuity of Nature in the aggregate, it is easy but unsafe to act as though this continuity were immutability, for it is to be remembered that our stream is occasionally subject to strange windings and disturbances in its endeavours to attain its end, and then, woe betide the unfortunate!

And now, bringing our reflections to bear on the lesser world of Insurance, it will be seen that of late momentous changes have taken place, both at home and abroad, and in all quarters there is a struggling and a straining towards adaptation to new conditions; for adaptation is a necessity for survival where there is not sufficient strength to modify these conditions.

In Great Britain, after long years of vain deliberation, compulsory insurance by the State has been introduced—at a stroke ensuring more diligent study of Insurance by the mass of the community than could be achieved after years of strenuous labour by an army of agents; and, further, has at once and entirely altered the relationships of Industrial Offices

and Friendly Societies to the community. The former, it might be suggested, who, until the passing of the Insurance Act, offered almost the only Life Assurance provision obtainable by the working classes, will henceforth, so far as they do not fall within the machinery of the Act as Approved Societies, supply the additional assurance required by the same classes, to the extent of the available means of these people, and to the extent that the ordinary Life Assurance Offices with their cheaper rates cannot or will not cater for them; the latter, so long an insuperable obstacle to any State scheme of Insurance, with their—on the average—difficult financial position, their transitional and incomplete development in relation to strict actuarial requirements in the matter of valuations, and yet with it their social value and long history, embodying such a splendid record of independent self-help, are now relieved, for a time at least, of many of their burdens and difficulties, at the cost, however, of much that was outstanding and characteristic. Here, then, is to be seen a great change which is only just being effected. How few there are comparatively that can truthfully claim to have realised what it has meant, what it yet may mean! Even in Germany, where a similar law has been in force for a generation, the new problems have not by any means been thoroughly worked out; and of France, a much more recent imitator, the same may be said.

The position of Industrial Insurance in particular in relation to compulsory State Insurance has been long and keenly discussed on the Continent. The general trend appears to be to conclude that the Industrial Offices, in spite of all their achievements, have not been able to supply sufficiently the insurance wants of the industrial section of the community, although this conclusion is not held to imply blame on the Offices. Thus it has been considered that the working-man in the aggregate was not strong enough, financially, to buy all the insurance requisite for the wants of himself and his family; that, collectively speaking, he was not strong enough morally to buy all the insurance he could afford, and that what he did buy could only be kept going by the assiduous attentions of an enormous army of collectors. Consequently the Offices could not supply insurance cheaply enough in view of these requirements. The only alternative, to achieve a speedy



amelioration of the workman's circumstances as to insurance, seemed to be for the State to step in, and by aiming at reduced expenses and distributed burdens, to compel the workman to do that which he was not able to exercise sufficient self-denial to do for himself. An apparent benefit was conferred by placing certain burdens on employers and on the State, which, even if they fail ultimately to avoid the falling of the whole burden on the workman himself, at all events facilitate the introduction and initial stages of these measures.

It may not be out of place here to mention that State Insurance, far from injuring Industrial Insurance ultimately, is supposed by various Continental writers to have facilitated its ultimate development by spreading so widely a knowledge of the benefits of insurance that the meagre cadres of the State scheme soon proved inadequate to supply all the insurance required. Still, it has to be borne in mind that the State scheme of Germany provides very small benefits, and that the development of Industrial Insurance in that and other countries could not by any means compare, at the inception of their State Insurance schemes, with that attained in this country. It is not, therefore, too readily to be assumed from analogy that Industrial Insurance in Great Britain will at all speedily recover its lost position, while time is requisite before we can estimate actuarially the extent of the bargain that the community has made by the exchange.

It is perhaps in some respects rather sad to reflect that Great Britain, which, by the sturdiness and self-reliance of its working classes, through its Friendly Societies, Industrial Societies, and similar institutions, had attained a proud position of eminence among the world's civilised countries, has now by the operation of the Insurance Act from some points of view fallen behind, until at least the new Act has become thoroughly established and efficient in working. We can only reflect that these institutions did not prove themselves completely able to fulfil the too heavy demands made on them, and that the natural laws of development allow of no excuses or explanations for an incomplete inadaptability to circumstances.

As to ordinary Life Assurance, the relations of the State to the Offices have not in this country been seriously affected, for the Life Assurance Companies Act made no such far-reaching changes, but so much cannot be said of other countries.



In the United States, the internal troubles of some of the large Offices led to the enactment of very severe laws in the State of New York, followed shortly by many other States of the Union; in Canada, partly in consequence of what has just been said, the entire law affecting Life Assurance Offices was recast, though on a less stringent basis than the American. In many countries, almost too numerous to particularise, Life Offices, formerly practically unrestrained, have now been brought under the operation of laws more or less strict. In Denmark and Japan this has taken a form inimical to foreign Offices working in those countries; while, last to be mentioned, but on some accounts most interesting of all, Italy has ousted the Companies altogether, and its Government has arrogated to itself a monopoly of the whole business.

In Switzerland and Germany new branches of development have come into force, in the shape of laws regulating the contracts between assurers and assured, and other countries are contemplating similar steps. In this country sundry proposals to this end have hitherto failed, except as regards Marine Insurance.

It would lead too far from the immediate object in view to attempt to discuss which of these tendencies and changes, and if any, to what degree, are to be regarded as true signs of the times, and as such, to be improved and encouraged, and which of them, as contrary to the spirit of genuine progress, or unsuited to the present stage of human development, are to be regarded as what has been termed adventitious.

For it is clear that if we could decide which measure was the best every country would at once introduce it, and thus at one and the same time do the best for itself and secure a convenient uniformity of practice with all other countries. But the great difficulty in dealing with human affairs is that what is best suited to one country at one time is not necessarily adapted to the requirements of other countries at that time, or even to those of that country itself at another time. Still, a careful study of all existing methods of dealing with the same problem is of the greatest possible advantage in deciding on the best that can be done.

As to Employers' Liability in its various aspects, there has been a long and instructive historical development from the days of the old Roman Law, according to which the employer

had to compensate the workman for injuries only if the former were to blame, beyond our present position to the German State system of insurance, which may perhaps be viewed as the furthest step to date. Here we have a successive alteration of relationship between man and man, *i.e.*, workman and employer, workman and Insurance Office, and, finally, workman and State. For as the burden placed on the employer became too heavy for the individual to carry, he perforce transferred it to the Insurance Office; and where the Insurance Offices did not prove themselves amply capable of assuming the responsibility, or were not generally considered to have done so, the State stepped in: a story with an obvious moral.

In reviewing the position of the above branches of Insurance business, it appears that the State tends to encroach on private enterprise, although it is yet far too early to decide on the balance of advantages and disadvantages therein involved.

In Fire Insurance, however, at any rate the Offices have more than maintained their ground in public estimation. Thanks to sound business acumen, as exhibited in the building up of solid reserves, rendered possible by combination and adequate premium rates, they have been able and willing in times of stress and catastrophe to act with remarkable liberality—certainly in some instances in excess of their legal liabilities, if not going beyond the necessities of the case. The recurrence of such deeds has established and confirmed the confidence of the world that our British Fire Offices at least are the right institutions in the right place. One comment only is called for: the business of Insurance is so complicated for the ordinary man, that in paying his premiums he wants to be convinced that he really is getting insurance. Of course, he is anxious to get it as cheaply as he can; and so a cut rate naturally appeals to him. If, however, the ultimate outcome is a dispute over a difficult legal point in settling a claim, where the Office cannot afford to act with generosity, he, the ordinary man, at once decides he has been deceived, and the whole credit of Insurance suffers accordingly.

Legislation has only so far touched Marine Insurance that a recent codification of the law has to be recorded. But a step that might have had important consequences, and which indeed aroused the greatest interest abroad, was the institution of an enquiry into the desirability of a State scheme of insur-

ance against losses at sea in time of war. It will be recalled that it closed with the dictum that the best form of insurance was a strong Navy.

Since we have seen that there is a strong tendency for the State, not indeed so much our own as in various other countries, to interfere in the working of Insurance Companies, especially Life, in one way or another, it may be as well to consider briefly what form this interference is taking. To this interference the general term of State supervision is broadly applied, but it will be found that it actually varies from a mild mechanical process to a searching attention to the smallest details of the business.

It may be observed that the prevalent systems have been classified under three heads, namely—

- (1) The system of Publicity ;
- (2) The system of a Fixed Standard ;
- (3) The system of Concession and State Supervision.

The system of publicity is that with which we are best acquainted, as being that prevalent in Great Britain. Practically no restrictions are placed on the operations of the Offices beyond the making of a substantial deposit, the only condition being the submission of periodical reports in prescribed form from which the financial position and progress of each Office can be determined with sufficient accuracy. In various countries, however, it was felt that such an extent of freedom would not be suitable, and the great objection even to the accounts was that, with a business so complicated as Insurance, only an expert could be expected to understand elaborate returns, and that life was too short for a man contemplating insurance to take up the study. Accordingly these communities adopted an intermediate course: they said they would not interfere to any extent with the internal affairs of the Offices, but demanded that the liabilities of the Life Assurance Offices should be calculated on a certain fairly stringent basis. If this condition could be met, well and good, the Office was allowed to solicit business; if not, the permit was withdrawn.

Now, while it is evident that the first method is only well suited to a people accustomed to business and having certain well-defined qualities not possessed to a sufficient extent

everywhere, experience all the same has shown that method number two labours under certain defects. First of all, there is the difficulty of determining a fair and proper basis. Life Assurance science is not yet so far advanced that the determination of the liabilities of an Office can be made on an equitable basis applicable to all sorts and conditions of Life Assurance institutions. This being conceded, it results that any particular method adopted is likely to prove injurious in one way or another. If too severe, it presses too hardly on young Offices having slight reserves; if too lax, it so lowers the standard which all strive to attain, that extravagance may be encouraged. Since Offices could not be expected to set aside reserves greater than those required by law, there would be a temptation to dissipate in other directions the funds not so needed. Then again, suppose an Office has misfortunes with its investments or otherwise. Let us suppose a security heavily, though possibly temporarily, depreciated to such an extent that the standard of solvency cannot be reached. Liquidation, loss, and destruction ensue, when a few years of careful management might have set things right. Thus this system causes injury where assistance would be the truest statesmanship.

Following, then, upon this, the development has generally been in the direction of the State prescribing more and more exactly how the Company should conduct its affairs, the regulations being in some cases extremely elaborate, as, for example, those in force in Germany and in the State of New York. The disadvantages of this concession system arise, curiously enough, from quite a different source. Thus the public is so content to know that the State will not allow an insolvent or even really ill-managed Office to seek business, that the selection of an Office becomes quite perfunctory, and so there is a risk that the really best Office will not secure all the support it deserves. Moreover, if for any reason the skilled vigilance of the State should relax, chaos ensues, and this has actually happened. As against this, however, there are many important practical advantages, as is evidenced by the remarkable development of insurance in those countries where the supervision is most strict, and by the fact that this system is rapidly gaining ground. In the words of Professor Manes, of Berlin, the public interest is very deeply concerned in a prosperous and solid development of Insurance, and



imposes on the State the duty of especial precaution in this matter. The guiding principle in this is, on the one side, regard for the great economic social and ethical importance of Insurance; on the other side, the danger of serious injury to the popular well-being, which would be threatened by a misuse of Insurance—a danger the more imminent since in this matter the careful and sensible citizen is not able without external assistance to form a reliable judgment as to the status of the institutions in question. It is beyond question that there is much to be said on both sides for each of these systems; each has its advantages and disadvantages. Possibly we as Insurance men prefer our own method, in accordance with which we enjoy a large measure of freedom of action. At the same time, we have to recognise that it entails on us in turn a grave responsibility, to make sure that public confidence in us has not been misplaced. For insurance legislation is naturally the outcome for the most part of popular views regarding insurance and insurance companies. As these views will depend partly on the companies themselves, and partly on the characteristics of the public, some attention may fitly be directed to this aspect of the matter.

Now, the causes which determine the relationship of the public to insurance have been classified by a Dutch writer, Dr. J. van Schevichaven, of Amsterdam, as follows:—

- (1) The characteristics of the public itself;
- (2) The actions and nature of the companies and their representatives;
- (3) Legislation and its consequences;
- (4) The attitude of the general and of the insurance press.

The conception of insurance and of the institutions concerned with it is in every country closely connected with the material and intellectual development of the people and with their peculiarities of character. Their material position clearly has an important bearing. Insurance is a special form of saving, and saving the evidence of a certain well-to-do-ness. He who has barely enough on which to exist will not be able either to save or to insure, however much he might wish to. For such a one, insurance is a luxury; but for those who can save something, a life policy at any rate is a want which he should endeavour to supply as speedily as possible. Even the need for saving indicates a degree of intellectual culture. The

higher the culture the more clearly realised is the need for that special form of saving called insurance. Then again, a strong tendency to domesticity and family life favours the growth of insurance, and the reverse will hinder it. Further, people who lightly enter upon financial operations will readily effect an assurance, without troubling unduly as to the choice of the office, and as lightly surrender it again, an excellent new business being overshadowed by heavy lapses; others, less easily moved, will be more careful in choosing an office, and less prone to abandon their assurances subsequently.

The confidence of a suspicious people will only be gained by the Companies with difficulty, and those once assured will be liable to hearken to twisters. Where conscientiousness in business is customary, this may generally be predicated likewise of insurance companies, and a deception in this direction on the part of one of them may give rise to a lasting distrust, or even injure the good name of insurance altogether. But where cheating in business is quite usual, whether on a large or on a small scale, insurance institutions are not usually judged much more harshly than other commercial undertakings. Then, naturally, the degree of understanding regarding assurance possessed by a nation largely affects its relations to the offices. The vast majority of cases of dissatisfaction and disagreement between public and offices are due to the ignorance of the former of the real nature of the insurance contract. And their degree of knowledge again will be affected by their general culture, the history of Insurance in their midst, and the legislative position.

Another factor that influences greatly the attitude of the public towards insurance is the relation between the companies themselves. If the inevitable competition between them is conducted on fair lines, it will enhance the esteem in which they are held; but if the struggle for business leads to mutual recrimination and vilification, the result is injury all round, for the would-be assured is only too likely to discount heavily the self-praise of competitors, and to attach credence to the defects of the rivals which are claimed to be exposed. This consideration accordingly suggests a further weighty aspect of the question, and that is the human machinery by which the business of insurance is worked, and especially that portion of it that has the extremely onerous duty of meeting



the public. It is perfectly well known how ready the public is to value any Insurance Office in terms of its esteem for the representatives of that Office—mainly, of course, the members of the outside staff, branch secretaries, inspectors, canvassers, and agents. Furthermore, it is by no means evident that the public is wrong in so doing, on the whole, since it has to be borne in mind that the powers that guide the destinies of the Company are likewise those that, mediately or immediately, directly or indirectly, have selected the outside representatives above mentioned. So marked have been the ill-effects of mistakes of this kind in the past, and so beneficial are the results of a straight and keen outdoor staff, that in various countries strenuous attempts have been and are being made to consolidate agents in particular, to regularise their position, raise their status, and even more, to strengthen in them an *esprit de corps*, a feeling of mutual respect and good fellowship, calculated even in cases of severe stress to ameliorate the rough conditions of competition, both by lessening the likelihood of unfair criticisms of the opposing Office, and by diminishing, if not eradicating entirely, the suspicion that the said rival will lend himself to unjustifiable insinuations. Associations to this end have for some years been active in the United States, in Canada, in Germany, and in France. In Great Britain, also, there is a widely-spread organisation of similar type. The Canadian Association of Life Underwriters may perhaps be mentioned as especially typical of what good things such a body can achieve. The report of its Annual Conventions, published by the Canadian Insurance newspaper, "Office and Field," makes excellent reading, besides breathing a spirit of enthusiasm and good fellowship. There are many problems of outstanding interest in connection with the gradual evolution of agency systems, where a thorough analysis of the past and a careful study of the present might lead to useful forecasts of the future; but even to attempt to deal with the two former would demand separate treatment.

Although it does not appear that insurance companies owe much direct business to the Press, a point raised by the above-mentioned Dutch writer, there is little reason to doubt the great influence it exercises over the views on insurance held by the public. This occasionally comes strongly to the notice of representatives of the Offices after the publication of any very

strong article in a newspaper or magazine. If the said article is inaccurate or spiteful it is no easy matter to set things right. It is, unfortunately, only the unpleasant ones that are so much discussed, but still it is to be hoped that the many really informing contributions to the general press on insurance matters similarly exercise a due influence for good. In any event, it cannot be gainsaid that the press is powerful, and consequently much responsibility rests on it to act justly.

No note of this kind could fail to refer, however lightly, to endeavours that have been and are still being made to internationalise insurance work in various ways, both in ordinary insurance and in State Insurance. Thus, as regards laws on state supervision of insurance, it appears from an official communication from the Swiss Federal Council that a step forward has been made towards a uniform style of reports and accounts for quite a number of European countries. Then, as regards insurance contract law, some progress has been made, since the new Austrian Law closely resembles the German in sundry material respects. Then the Society of the Eldest of the Merchants in Berlin has been proposing the formation of an International Court of Arbitration for disputes between Governments and foreign Insurance Companies. In a carefully-prepared memorandum to the German Imperial Chancellor they pointed out how awkward was the position when difficulties arose between the Government of one country and an Insurance Company belonging to another, with a statement of the inadequate facilities for obtaining redress, and in particular the unsatisfactoriness of the diplomatic machinery for such a purpose.

International co-operation of another kind is being advocated by the International Agricultural Institute of Rome. This body desires to establish hail insurance on the broadest basis, and to this end appeals for uniformity in hail statistics, both from a meteorological and also from an economical point of view. It would again be hard to over-estimate the good that may be achieved by the International Association of Marine Insurers, which has recently been called into existence, while the Permanent Committee of Social Insurance, of Paris, has already in hand a preliminary attempt to systematise a World Workman's Insurance Law, undertaken by Stier-Somlo, who has recently demonstrated

the practical universality of the same legal problems in those countries that have State Insurance for workmen.

Lastly, Dr. Hans Wehberg, of Düsseldorf, has brought forward a scheme for an international Insurance organisation in connection with the Hague Bureau for Internationalisation, the object of which is, *inter alia*, to accumulate information as to all branches of Insurance, especially bibliography, the collection of statistics, the advancement and organising of international Insurance associations, etc.

The mere enumeration of these movements will illustrate the earnestness with which the minds of men are being turned to seek means whereby a given end may be attained by co-operative effect, without the friction and hindrance due to ignorance in all conceivable forms that everywhere oppose human effort.



# WORKMEN'S COMPENSATION FROM A MEDICAL POINT OF VIEW.

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By JAMES YOUNG, M.D.

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*A Paper read before the Insurance Institute of Bristol,  
15th December, 1911.*

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WHEN I fell, as doubtless many better men than I have fallen, under the blandishment and persuasive eloquence of your able and energetic Secretary, I am afraid I hardly realised the magnitude of the task I had so light-heartedly undertaken. I was carried away by the almost Hibernian geniality of my friend, Mr. Bolton, and I was conscious too, I confess, of the great honour conferred upon me in being privileged to address you upon a subject in which so many of you are so deeply interested.

The relations of the employer and the employed have received a large share of Parliamentary attention in recent years. Within the last three decades four great statutes have appeared in rapid succession—The Employers' Liability Act of 1880, and the Workmen's Compensation Acts of 1897, 1900, and 1906. Of these, the last-named is the most important and far-reaching in its operations. This measure affects, directly or indirectly, all classes of society, and it has an especial interest to the profession to which I have the honour to belong in that it cannot be successfully carried out without the co-operation of its members. Medical and surgical evidence in claims to compensation for accidental injuries is indispensable, and it is the peg upon which everything hangs. In consequence of the importance of such evidence, there have been brought into being, as it were, a class of medical men who have come to be regarded by your great Insurance Companies as experts. They have become so by virtue of the possession of certain qualifications, which should include a thorough knowledge of

their professional work, sound judgment, and an acquaintance with human nature and its frailties, the last-named being by no means the least important possession in dealing with Workmen's Compensation cases.

From my comparatively brief experience of the Workmen's Compensation Act of 1906, I am very strongly of opinion that the method of dealing with the cases coming under the Act requires remodelling. At the present time, when such cases come into Court, the question which the Judge is called upon to give his opinion is, in ninety-nine cases out of a hundred, *not* a point of law, but a purely medical or surgical one. The position, in fact, is almost Gilbertian. That a judge, a man, "learned" indeed, it may be, like Portia, "in the law," but possessing no real medical or surgical knowledge, should be called upon to pronounce an opinion upon a purely medical or surgical question is almost ludicrous.

More use should be made of medical referees, and if an arrangement whereby early examination by medical referees or assessors could be established an enormous amount of time and money would be saved. Their services should by law be enforced at an early stage of litigation. If this were done a Judge who has spent his whole life in law "would cease," as a recent writer has put it, "to be in the incongruous position of giving an opinion as to whether or not a man died from hæmoptysis or hæmatemesis—two terms which he may never have heard in his lifetime, which he will forget as soon as he has signed his interlocutor, and which he may possibly never hear again." Medical referees and assessors are called upon in only a small percentage of cases because their requisition is optional. Make their general use compulsory, and I am certain that it would have a marked influence in lowering Insurance premiums, and greater justice would be meted out to all. We should at least be spared experiences similar to that which came under my observation some time ago.

A youth employed by a large industrial concern sustained certain injuries to his leg through the fall of a piece of timber. The lad was genuinely injured, and compensation was paid accordingly. After many months a rumour was carried to the ears of his employers that the lad had been seen engaged in the healthful but somewhat vigorous game of football, and his employers very naturally concluded that he must have re-



covered from the effects of his accident. He was sent to me for examination, and was seen by me and a professional colleague, and we both were of opinion that, though some stiffness of the ankle joint remained, the lad was quite fit for work. In due course we both expressed this opinion to the learned Judge before whom the case was heard. On this occasion no medical witness appeared on the youth's behalf, but his astute counsel, deploring the absence of his medical witness, submitted a skiagram which had been taken in the early days of the injury—soon after the accident—and argued that it was impossible that the lad could have recovered from the effects of such an injury already. His arguments were aided by the appearance of his client, who limped ostentatiously on his way to the witness-box, and poured a tale of woe into the sympathetic ears of the learned Judge. His Honour disregarded entirely the evidence of my colleague and myself, considered that we must be entirely mistaken, and decided that the lad was still unfit for work and that the award must continue. But now comes the sequel. Some six months afterwards the case was again brought before the gentleman learned in the law, and on this occasion a witness entered the box and stated that he was a haulier employing a number of youths and men, and that within a few weeks—two or three, I think—after the previous hearing of the case, when His Honour had taken upon himself to decide upon a purely surgical point against the opinion of the professional witnesses, and had come to the conclusion that the claimant was still suffering from the effects of the accident to such an extent as to totally incapacitate him, the lad had gone to this haulier and was taken on to work. The haulier stated in the witness-box that he had never observed the least thing wrong with the lad, no limp or other indication of physical discomfort, that the lad had never complained of anything being wrong with him, and that he did his work as well as the other men and earned his wages regularly as long as he was employed by him. When His Honour heard this evidence there was, of course, nothing more to be said except that which he *did* say—that it was “one of those swindling cases which sometimes came before the Court.”

But, gentlemen, who was unwittingly led to be a party to the swindle? His Honour himself, of course, through his lack of surgical knowledge. Here, then, gentlemen, we have surely

an argument for the more frequent use of a medical referee or assessor. In such a case a decision of this kind would be impossible, and the employers of the lad would have been spared much expense and trouble, the Judge would have been spared an unfortunate decision, and the claimant himself would have been kept from such an exhibition of moral turpitude!

Having sought the opinion of an expert, a Judge should be called upon to respect that opinion. It has been decided in the Edinburgh Court of Session, in the case of the Scotstoun Estate Co. *v.* Wardrop or Jackson, with which probably many of you are familiar, that an arbitrator is not bound to accept the medical referee's report as conclusive. This was a case in which there was a conflict of medical opinion. Three medical men on behalf of the claimant expressed the opinion that he died from rupture of a blood-vessel, muscle, or valve of the heart, whilst three others on behalf of the Company were of opinion that death resulted from natural causes. In consequence of this conflict of opinion the Sheriff-Substitute remitted to one of the medical referees under the Act to examine and report on the evidence. He reported that the claimant died from disease of the heart, *i.e.*, from natural causes. The Sheriff-Substitute, however, held "that Jackson died from a rupture of the left side of the heart caused by the strain resulting from the work in which he was engaged," and awarded the claimants £280 with expenses. The appeal was heard in the Edinburgh Court of Session before the Lord President and Lords Kinnear and Mackenzie, and the questions of law stated for opinion of the Court were:—

- (1) Whether the Arbiter, having in terms of the statute remitted the evidence led to the medical referee for report as to the cause of death, was bound to accept or be guided by the medical referee's opinion?
- (2) Considering the facts proved, whether there was sufficient evidence to find that the deceased died from a rupture of the left side of the heart caused by the strain resulting from the work in which he was engaged?

The Court, answering the first question, held that the Arbiter was *not* bound to accept the medical referee's report as conclusive on the questions which he had to decide, and found it unnecessary to answer the second question, and affirmed the judgment of the Sheriff-Substitute.

What, then, in the name of fortune, is the use of a medical referee at all? He is supposed to have special knowledge of his profession, and to be in the best sense of the term an expert qualified to give an authoritative opinion on points of medical or surgical obscurity. Is it conceivable that a man of law, however learned in the intricate points of his own profession, is more qualified to decide upon obscure questions of medicine or surgery than one of high standing in these great professions? If you desired to throw light upon the dark places of the law, to clear up some really obscure legal point—the legality of Form IV., for example!—would you go to the President of the Royal College of Physicians or Surgeons for that purpose? But this is the Gilbertian method of dealing with Workmen's Compensation cases in which you are engaged daily.

But I would venture to go further in the use that might advantageously be made of our profession in dealing with Workmen's Compensation cases. I should take the question of deciding upon the purely medical or surgical points in such cases out of the hands of the man of law altogether. I should establish in each County Court area a Medical Board, consisting of two or more medical men, by whom the patient would be examined, and who would, if necessary, have the statements of the claimant's and the Company's medical men before them, and upon this Board would devolve the duty of deciding upon the medical or surgical aspects of the case. It would then be their duty to submit the opinion of the Board to the Judge, and upon their report he would base his opinion as to the nature of the award to be given.

The members of such a Board would require careful selection. The qualifications would be somewhat similar to those I have already referred to when speaking of Workmen's Compensation experts: they should possess a sound knowledge of their profession, combined with the judicial mind and a knowledge of human nature. The advantages of such a Board would be many and great. The most important would, in my opinion, be that greater justice to all parties concerned would result. Under existing conditions the medical aspect of the Act is most unsatisfactory alike to Judges, claimants, defending Companies, and to the medical profession itself. Each medical witness is, generally speaking, prone to approach

the case influenced by the party for whom he is acting. The Judge, therefore, frequently hears only conflicting medical evidence, and therefore evidence which more often hinders than helps him to a clear understanding of the medical points in a case. By the Medical Board a case would be considered entirely upon its merits: the mind of the Board would, under the circumstances, be entirely free from bias, and would approach the case uninfluenced by any extraneous conditions. They would in all cases, when possible or necessary, themselves examine the claimant, and would use all the knowledge with which they were endowed to arrive at a sound and fair judgment of the claimant's disability or otherwise. It may be suggested that the establishment of such a Medical Board would add greatly to the cost of litigation, but I venture to doubt whether it would really do so in the end. It might increase the cost of an individual case, but I am quite certain that fewer cases would be fought in the Courts when lawyers realised that mere forensic ability, combined with brow-beating an opposing medical witness, would no longer be of service in obtaining for their clients a favourable decision by the Judge upon a purely medical or surgical question.

At the Court of Inquiry by the Medical Board no lawyers would be present: their services would not be required at that stage of the proceedings: they would enter upon the scene, as now, when the case came to be heard by the legal Court.

But it is really astonishing what a very insignificant percentage of cases are heard in Courts even now. From a table compiled from a Blue Book which was issued by the Home Office in September, 1910, dealing with the official records of Compensation under the Workmen's Compensation Acts, 1906, I gather the following facts:—

No. of cases during the year 1909 .....	335,953
Of these, there were settled out of Court .....	332,866 cases.

That is, 99.1 per cent. of the whole.

Settled in Court, 3,087 cases; that is, 0.9 per cent. of the whole.

This means that in 99.1 per cent. of cases the employer or Insurance Company submits to the injured workman having



his claim settled without a judicial decision. This is not altogether surprising in face of the figures which follow. Of the 3,087 cases settled in Court, there was a verdict for the applicant in 2,427 cases, equal to 78.6 per cent. of the whole, while in 660 cases, equal to 21.4 per cent. of the whole, a verdict was obtained by the respondent employer or Company.

From such experience as I have had I am convinced that, unless it can be proved by legal demonstration that no injury has ever been sustained, an Insurance Company is wise to begin at once negotiations for consideration of the claim. Having admitted accident and injury, the sooner the medical examination and report are obtained the better. There is often a great deal of time lost in preliminaries, and I am convinced that early medical examination and a prompt endeavour to settle would lessen very considerably the expense of litigation. The longer a case is allowed to drag on, the greater is the risk of there being superadded to the original injuries that difficult and most intractable of nervous complications known as "Traumatic neurasthenia"—with which you who deal with Workmen's Compensation cases are all too familiar, and the very thought of which is to you a veritable nightmare, so greatly does its existence add to your difficulties of settling a claim. The necessity of early and repeated examinations is specially urged in the case of a suspected malingerer. It is doubtful whether the term malingerer quite designates the class of parasite which the Compensation Act has created. A malingerer, in the accepted sense, is a person who feigns illness in order to avoid work or some particular duty: the new type is a person who feigns illness in order to get money.

A true malingerer should be unmercifully dealt with, because he inflicts an injury on real sufferers, and there is only one thing worse than reporting a malingerer as suffering from an accident, and that is reporting an honest man as a malingerer. Malingering undoubtedly has increased and is increasing. It is much more common in accidents than disease, probably because of the legal liability of the former. But the attitude of mind of the medical man who regards every litigant he is asked to examine as a malingerer is manifestly a wrong and unfair one, and is likely to lead him into trouble. It is essential, in order to hold the balance true, that one should approach all cases with a perfectly open, unbiassed

mind, remembering at the same time and always that exaggeration of symptoms is a common feature in certain forms of true neurasthenia, and that the line which separates this abnormal though frequent type of nervous condition from wilful fraud is a very narrow one.

It must be remembered that sick and injured workmen belong to a class whose education is incomplete, and that they are peculiarly unfit to take a detached view of themselves, especially when ill. Too often the essential aspect of their case is the value put upon their abnormal sensations in so far as they influence their claim for compensation. Experience teaches that closely similar injuries attributable to like accidents present one kind of clinical picture and run one kind of course amongst those who make no claim for compensation, but they present a very different picture and run a very different course amongst those who embark upon the troubled sea of litigation. A "strained knee," got whilst playing football, for which there is no question of compensation, usually incapacitates the individual for a much shorter period than a similar injury sustained by a claimant for compensation under the Act! This difference is highly significant of the influence of litigation and compensation in magnifying pain and perpetuating incapacity. It is no less significant of the influence which litigation has, that when substantial damages have been awarded to the claimant, the severity of his symptoms frequently abate in the most marvellous fashion, and his capacity for work rapidly returns to normal.

In the armamentarium of mediæval practitioners gold and silver and precious stones were regarded as valuable therapeutic agents. In the more modern times in which we now live we have reverted to the agencies of the middle ages, and we have added to our ordinary therapeutic measures handsome cheques as aids to the recovery of injured persons.

Several cases illustrative of the well-recognised effect of "handsome damages against the Company" in restoring a hopeless wreck to physical well-being have come under my observation, one of which only I need mention.

A gentleman had the misfortune, whilst riding in a hired conveyance, to meet with an accident, in which he sustained, amongst other things, concussion of the brain. The accident occurred in the beginning of July, 1909. Fifteen months



later he complained of suffering from intense headaches, nervousness, of inaptitude for business, of being easily fatigued mentally and physically, of inability to concentrate his thoughts and for continued mental action for any length of time. As a consequence he was then only fit for very limited work, and his bookings had gone down to half what they had hitherto been. He felt confident he should never be able to do his full work again: he was a broken man, broken physically and mentally, and ruined financially as the result of this accident. His tale of woe and attitude of distress in the witness-box resulted in his obtaining very substantial damages against the Company concerned. But here, again, comes the sequel. The handsome cheque which, after many vicissitudes in the shape of appeals to higher Courts, ultimately found its way into the gentleman's pocket, did for him what the ordinary therapeutic measures which had hitherto been employed by his medical advisers had utterly failed to do. From that day he began steadily to improve, and it was my privilege to examine him again for another purpose. I had seen him from the early days of his accident up till the time when he came under the successful "treatment" of the sympathetic jury. On this more recent occasion some months ago I saw him on behalf of an Insurance Company with whom he desired to renew his accident policy. Very naturally, however, the Company, some of whose representatives had heard him recount his terrible sufferings and his dire outlook, and had seen his attitude of despair in the witness-box some six months or so previously, felt that he was no good subject for renewal of an Accident policy, and that at least some advice on the matter was necessary. I saw the gentleman at his own house on a Sunday morning (the choice of the day was *his*, gentlemen, or, as a strict Sabbatarian Scotsman, I should not have so desecrated the Sabbath!). I was shown into his dining-room, where presently the late broken-down, incapacitated, mental and physical wreck bounced in in the most jovial, hearty, rollicking fashion, and gave me the most genial welcome. In answer to my enquiries, he assured me he was "practically as good a man as he had ever been," no headaches, nerves splendid, able for as good a day's work as ever, and "better, much better than most the young 'uns now!" His ability for mental action was restored to normal, and his

bookings were now practically what they were before the accident; in fact, he had had "about as good a half-year as he had ever had!" There is no doubt that, as far as this gentleman's mental condition was concerned, the prescription of the sympathetic and intelligent jury had produced the most satisfactory results. The only drawback to the more general use of such an excellent therapeutic agent is, that it is a somewhat expensive one, and handsome cheques running into a multiplication of four figures are not likely to be found in the dispensaries of *many* medical men, especially amongst those who may be disposed to undertake the care of the nation's health under Mr. Lloyd-George's Insurance Bill!

I do not, however, wish to suggest for a moment that this man was a malingerer, and that the symptoms of which he complained existed only in his fertile imagination. Most of the symptoms were genuinely those associated with more or less severe injury to the head, whilst others might reasonably be attributed to our old friend, traumatic neurasthenia. Now, it must be clearly understood that this terrible bugbear to you gentlemen who are engaged in settling accident and compensation claims is a really genuine and well-recognised complication of accidents, and the statement has frequently been made—and it is no doubt familiar to you—that in traumatic neurasthenia of adults there is little likelihood of any improvement of the symptoms until the conclusion of the legal process, and there is no doubt a considerable amount of truth in this statement:—"A gentleman, *æt.* 40, was sitting in a train that was run into from behind by an express. The noise and confusion were terrific, and many persons were severely hurt, but he himself escaped with nothing beyond a slight shaking. He lost his nerve, however, completely, and a few days later gradually developed typical hysterical left-sided paralysis with loss of sensation and of the special senses on the same side, double vision and loss of colour vision on that side. The last-named symptom he was not aware of until his eyes were tested, for with both eyes open he could recognise colours perfectly. The presence of this symptom without his being aware of it was alone sufficient to disprove any theory of malingering, which indeed was not put forward. While the legal negotiations for compensation with the Company were proceeding he was unable to attend to his profession, a fact

which greatly worried him. He was getting worse instead of better, and a certain degree of loss of control over both his bladder and bowels developed. Yet within a week of his claim being settled by the Railway Company he began to improve, and he rapidly got well and was able to return to his work, and he has remained well now for ten years.”—(“The Practitioner”—“Traumatic Neurasthenia”—Jany. 1911.)

The class of cases in which traumatic neurasthenia arises may be divided into two main groups:—

- (1) Those in which a severe blow has been received on the head or spine, and in which the symptoms date from the occurrence of the actual accident.
- (2) Those in which the actual injury, if any, affects other parts than the head or spine, and in which the symptoms usually develop gradually some weeks after the so-called accident.

The symptoms of traumatic neurasthenia in themselves do not differ from those of neurasthenia due to other causes. Prominent among them are headaches—either on top or back of head—depression, loss of memory, and inability to focus the attention on details so that they find it impossible to continue their regular work; vague pains in the back and limbs, palpitation and persistent rapidity of the heart's action, sleeplessness, bad dreams, muscular weakness, and a tendency to break out in clammy perspiration. Sometimes the insomnia is replaced by heavy dreamless sleep, the patient waking up unrefreshed and feeling more tired than when he went to bed. He may develop unreasoning fears, especially in relation to circumstances connected with the accident—thus an unreasoning dread of horses, a railway train, a motor-car, a crowd, etc., may obsess a person whose injury was acquired through one of these causes.

The practical bearing from your point of view is that in a case of neurasthenia developing after accident you should endeavour to clear the case off your books as soon as possible. You must clearly understand that traumatic neurasthenia is a real and genuine complication of accident, that it is most difficult of treatment, that it is usually of a very protracted nature, and that so long as negotiations for settlement, either by litigation or more pacific methods, are pending, so long is the condition and consequent incapacity likely to last. The

fact, however, that a workman improves in his condition after he has been awarded compensation by no means proves that he is a schemer, since uncertainty and the excitement of legal procedure are just the conditions to prolong the symptoms.

A fruitful source of litigation under the Workmen's Compensation Act is the production of hernia, alleged to be the result of injury to a workman whilst engaged at his employment. Knocker says:—"There is probably more fraud connected with claims for rupture produced by an accident than can be found in all the other cases of fraud for the rest of the body. Of the cases that claim compensation for damages for hernia as being caused by a *sudden* strain probably not one in ten is genuine."

The Departmental Committee on Compensation for Industrial Diseases in connection with the Workmen's Compensation Act, 1906, in their final report, made the following statement:—"The evidence which we have received from authorities of eminence is definitely to the effect that hernia may, though very rarely, be due to a sudden strain, in which case it would be the subject of compensation, if caused by the employment, as an accident. But what usually happens is that some cough or particular strain brings down a little further a hernia, which has been slowly developing, so as first to make it prominent and attract attention."

This is undoubtedly true, and what usually happens is that the workman who finds himself ruptured casts around in his mind for some undue strain or excessive effort to which he has been subjected some time previously to account for the hernia. Rupture is exceedingly common. The layman has no idea how common or how much daily laborious work is performed by working men with a rupture. The capacity for work of a working man who wears a well-fitting truss is considerable, but it is astonishing what very heavy manual labour is daily performed by men who have no truss to keep back their rupture. A man cannot safely engage in laborious work with an untreated hernia, for the danger of its increasing or becoming strangulated is so great as to render it most unwise for any man to run this risk, although it is constantly done by the uneducated. A truss enables most men to work for years, and employers would be surprised at the number of their employees who are wearing trusses and doing really heavy



work. After operation for hernia the man can usually return to work in under three months. A little pain in the scar is commonly complained of, but that is negligible as an interference with work. "It is only in less than 5 per cent. of the cases that operation fails to cure." (Knocker.)

It is not always safe to take a claimant's statement that he has ruptured himself as the result of a strain as being the truth. A short time ago I was asked by a Company to see a young man who had reported himself to his employers as having sustained a rupture as the result of a strain whilst lifting some sacks. I visited the patient at his own home and found him in bed. I heard his story of the alleged accident, and then requested to be allowed to see the "rupture." I found, it is true, a very distinct swelling in the groin, but as it did not present the usual characteristics of a hernia, I examined him further, when I found him to be suffering from a tolerably sharp attack of gonorrhœa, and the alleged rupture was glandular enlargement produced by this unfortunate but not uncommon manifestation of worship at the shrine of Venus! As the condition was one which could hardly be described with any degree of accuracy or justice as "an accident arising out of his legitimate employment," the Company, needless to say, were absolved of their responsibility!

It is presumably not a very common occurrence for a workman to claim compensation for an accident alleged to have been met with whilst at work, but which was sustained under circumstances in no way associated with his employment.

In February of the present year I was asked by a firm of solicitors in this city to examine a man whose employment was that of a shipwright, and who alleged that he had met with an accident whilst at work in May of the previous year, since when he had been totally incapacitated from following his employment. His statement was to the effect that, whilst working on a barge driving bolts for fixing new planks to the barge side, he slipped and strained his thigh. I found on examination that there was considerable wasting of the thigh muscles of the affected limb, and indications of muscular strain and probably rupture of some muscular fibres. Inquiry into the circumstances of the alleged accident elicited such facts as did not satisfy me that the injury was sustained at the time and in the manner stated, and I reported my opinion to this

effect to the solicitors concerned. They accordingly decided to have the case fought out in the Courts, and the hearing of the case was set out for a certain day. Two days before that fixed for the hearing, however, the claimant suddenly withdrew from the case and the claim collapsed. Some considerable time afterwards a member of the firm of solicitors interested in the case was walking along the river side when he casually encountered a client for whom he had acted in a Workmen's Compensation case some two years previously. He entered into conversation with this man, and discovered that he was a nephew of the claimant who had so suddenly dropped his claim.

The solicitor was naturally interested, and the nephew thereupon told the true story of the accident to his uncle, which was to the effect that he had never been injured at work at all, but that he had strained his thigh through slipping down the stairs at his own home, and that the reason he had so suddenly withdrawn from the case was that he feared lest the true facts of the accident might be elicited by the Court, and that he should be prosecuted for perjury.

Though I trust such cases are rare, it is probable that similar fraudulent attempts to obtain compensation for alleged accidents whilst at work have come within the experience of some of you who are engaged in dealing with cases under this Act, and they certainly illustrate the importance of a knowledge of the frailties of human nature—especially that particular form of frailty which St. Paul ascribed to “all men”—and may I add also, of the value of medical examination, by which, in this case, certain facts were elicited which materially influenced the attitude taken in regard to the case by the solicitors acting for the respondent employers.

There are many other matters of interest which one might submit for your discussion to-night, but I fear I have already trespassed too long upon your indulgence.

Permit me to express to you my appreciation of the courtesy with which you have received me, and my congratulations to you upon the endurance you have shown in listening with such patience to what I feel has been at best a somewhat disjointed discourse.



## MOTOR INSURANCE.

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By THOMAS FLETCHER, Esq. (Assistant Accident Manager,  
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*A Paper read before the Insurance Institute of Cardiff,  
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BEFORE commencing my remarks this evening on the subject of Motor Insurance, I wish to thank you for the privilege of meeting you. I trust that if my remarks raise sufficient interest to lead to a general discussion, you will not consider your time wasted.

The subject of Motor Insurance is a very wide one, and I can only, therefore, deal with it in general terms this evening. That it is important to the members of our profession it is not necessary for me to emphasise; probably not yet, but the time will soon come when it will rank as the fourth most important branch of the many businesses now transacted by the various Companies.

The month of November, 1896 (only 16 years ago, and prior to which date all mechanically-propelled vehicles had to be preceded by a man with a flag), was probably the real commencement of the motor age, and many of you gentlemen present will probably remember the almost historical London to Brighton race, in which about forty cars started, but only four arrived, the highest horse-power being 8, and pneumatic tyres being almost unknown. Comparing this with the fact that now there are more than a quarter of a million mechanically-propelled vehicles registered, with horse-powers ranging up to 240, shows the rapid progress which has been made in this mode of travel, and that the attention devoted to it is fully justified.

There are various classes of vehicles, the principal of which are petrol-driven, embracing private and business cars, vans, lorries, and pantechnicons, and motor cycles. There are

also traction engines, road rollers, steam waggons, agricultural machinery, threshing machines, and ploughing sets. Inasmuch, however, as the most important section is that of private motor cars, I shall restrict my principal remarks to it, and only incidentally refer to the others in conclusion.

The scope of the private motor car policy at the present day, although it varies slightly with various Offices, is in principle the same, and embodies Insurance against—

1. The liability of the owner (including his friends or relatives whilst driving the insured car with his consent) for personal injuries to members of the public and damage to their property alive or dead.
2. Accidental damage of any kind to the car, including that sustained whilst in transit on land, river, canal, or sea, and usually damage caused by accidents, the result of mechanical breakdown, or wear and tear.
3. Mechanical breakdown.
4. Damage or loss by fire, lightning, explosion, or self-ignition.
5. Damage or loss by burglary, housebreaking, larceny, or theft.
6. Malicious damage.
7. Law costs incurred with the consent of the Company in defending any claim.

Other benefits are now being given—such, for instance, as the extension to the Continent; payment of solicitor's fee for defending proceedings under the Motor Car Act, 1903; technical advice on any matter relating to the car; medical expenses; allowance towards cost of hiring another whilst the insured car is undergoing repairs following upon an accident; indemnity to the owner whilst driving any other car when his own car is out of use; permission to transfer or cancel the Insurance if the car is sold or laid up; bonus for no claims during the year; discounts for owner and/or chauffeur only driving; compensation for accidents to owner, passengers, and chauffeur; and the general trend in regard to repairs is to give the Insured such authority in this respect as can be done consistently with reasonable safety, the cost of carriage to and from repairers forming part of the claim, and also to give the Insured the right to nominate his own repairers if such repairers do not charge more than those appointed by the Company.

Some of the essential risks I shall refer to in detail at a later stage.

I do not propose to mention the various rates charged, but may say there appears to be a great deal of doubt existing as to which of the two principles of rating adopted—viz., horse-power and value combined or horse-power only—is the more correct.

On the subject there has been a good deal of argument, one view being that the value must be considered, inasmuch as with the lower-valued cars the costs of replacements are not so expensive. Against this some hold the opinion that the wear and tear upon new cheap cars, their lack of stability, and the greater speed of which they are usually capable, due to light construction, are factors which nullify any advantage gained by reduced cost of repairs. In connection with old cars, it is suggested that, as they depreciate in value and are insured, accordingly for such lower values, the Companies are effecting a saving, but I am not at all sure that they are, as not only by advancing age do parts become more expensive to obtain owing to manufacturers closing down their business or not stocking old patterns, and so on, but the wear and tear to which the car has been subject causes probably a greater extent of damage than would result to a more modern car. Even if a car which cost £600 when new has depreciated to the extent of £300, it is only in the event of a complete total loss where any advantage would be gained, and how remote such an event is you will be able readily to judge. All other damage has to be repaired at the rate of £600 per car and not £300, and my own view is that the remote possibility of a saving on a total loss is more than covered by the increased cost of ordinary repairs.

The make of car, mileage run, locality, and age are all important factors, but owing to the difficulty of drawing definite conclusions they are not allowed to weigh with the Underwriter to the extent we should wish, but I have no doubt that as time goes on, and as difficulties are overcome, there will be some more scientific basis adopted than that at present. I should like to hear the views of the members on the subject.

To return to the various risks covered by the general form of policy, the most important is that of liability in connection with claims by the public, the Insuring Company's responsibility being limited or unlimited as may be required,

the latter usually being preferred. This liability to the public is regulated by Common and Statutory Law, and, briefly stated, is governed by one general principle, viz., that it is the duty of every member of the community to conduct himself in such a manner, and to exercise such reasonable care, as will not expose another member to unnecessary risks. It further follows that such other member shall not heedlessly run into danger, and if he, by ordinary prudence, can avert an accident, he has no right of recovery. This is generally called "Contributory Negligence," and forms the principal defence to any claim put forward.

I would like to make it quite clear, however, that the mere fact of a third party's negligence contributing to the accident is not a complete defence, as if, notwithstanding such negligence, the accident could still have been averted by the owner, the latter becomes responsible.

The next most important of the risks covered is that of Accidental Damage to the owner's car, and it is probably the most costly. It is usual to insure against all damage the result of an accident, but not to cover repairs necessitated by mechanical breakdown and wear and tear or freezing, although it is now a recognised feature of the policies that if an accident should follow upon such mechanical breakdown or wear and tear all damage the result of that accident is insured.

The principal difficulties experienced under this section are the broad views taken by a policy-holder regarding the items for which he is entitled to claim, and his refusal to recognise the equity of the contention that the undertaking is only to make good purely the results of the accident.

The repairers, I am sorry to say, in many instances look upon an Insurance Company as fair plunder (in some districts having formed "rings"), and perhaps not unnaturally exaggerate the extent of the repairs, remedying them in the most elaborate manner. The sooner it is recognised that this course will act adversely to the general motoring public the better, as, after all, the ultimate cost of all Insurance must fall upon the policy-holders.

Mechanical breakdown has, I believe, not only been unfortunate from the Companies' point of view, but has been most unsatisfactory from the Policy-holders', owing to the continual

disputes arising as to what constitutes mechanical breakdown as apart from wear and tear. It is really a general upkeep expense, and should be disassociated altogether from Insurance against accidents. There are two forms of cover, one covering any breakage of any part of the car, and the other limited to breakages of material parts.

Loss by damage, fire, burglary, or malice do not call for any special comment.

It is interesting to refer to two important developments—

1. The payment of the full insured value of the car in the event of total loss, thus doing away to a great extent with one of the basic principles of Insurance, viz., indemnity against actual loss sustained.
2. The extension to the Continent where in some countries there are no speed limits, and damages awarded are substantially high compared with those in the United Kingdom.

Lamps, accessories, tyres, and spare parts are usually covered whether the car is damaged or not, and in many instances the two former are insured whether on the car or not.

The policies are governed by a few necessary conditions, namely—notice of accident or claim must be given within a reasonable time; the Insured shall not make any payment or admission of liability without the consent of the Company, and shall render all reasonable assistance required; where the Company pays a claim the Insured subrogates to the Company any right to recover from any persons responsible for the damage and authorises the Company to use his name in any negotiations or proceedings relative thereto; where the Company's liability is limited in connection with any one accident it may pay the amount of its liability over to the Insured, and thus free itself from further trouble and expense; the proposal is the basis of the contract, and any omission of material fact or misstatement therein invalidates the policy; racing pace-making, testing, and speed trials are usually excluded, and loss by war, riot, civil commotion, or earthquake are not covered.

I have now given a general outline of the Insurance in connection with private motor cars, and the main features of it apply in general to the Insurance of the business vehicles before



mentioned—namely, delivery vans and lorries, private hire risks, traction engines, and so on. There are, however, a few special features in connection with the latter which I should like to mention, such, for instance, as the statutory laws and regulations, which are much more stringent and greatly affect the liability to the public; these regulations will be found in the various Highways and Locomotives Acts and Orders, of which I shall give brief extracts in due course, the principal restrictions being in connection with speeds (which are regulated by the weight of the vehicle), the number of attendants necessary, and the necessity for allowing as much room as possible for passing traffic, stopping when being signalled, etc.

It is not customary to insure mechanical breakdown, and the liability for accidental damage is usually limited to such damage as may be caused by external means.

There does not appear to be any uniformity in regard to the rates of premium for business vehicles. Each Company quotes what it considers to be adequate, and I have known of some most extraordinary differences. In fact, I have known private car rates quoted for commercial delivery risks. This is obviously wrong, having regard to the increased mileage run per annum, the generally poor class of driver, the weight of the goods carried, the greater difficulty of manœuvring, and the increased wear and tear.

It is generally admitted, however, that the present rates are much too low, and that, whilst ordinary delivery risks are fairly satisfactory, public and private hire risks, and manufacturers' and repairers' floating risks, have been most unprofitable to the Companies writing the business. I can only suggest that the general moral risk both of owner and driver is not so good as that in connection with a privately-owned car. The running risk is considerably greater, and the cars themselves are usually not so well built and up to date.

I have not gone very closely into the various points, as they affect mostly traction engines and other heavy vehicles over 5 tons in weight, which are rather outside the scope of my paper.

The Statutory Laws, of which I promised to give you a short digest, really divide the traffic under three headings:—

Locomotives.

Heavy Motor Vehicles.

Light Motor Vehicles.



Locomotives must (unless coming, as Motor Cars, within the provisions of the Acts of 1896 and 1903), be worked according to certain rules, among which are—

- (1) Two persons must be employed to drive or attend to such locomotive; and if more than three waggons are attached, then an additional person for the purpose of attending to the waggons.
- (2) Another person shall accompany the locomotive in such a manner as to be able to assist persons with horses or carriages drawn by horses passing the same.
- (3) The drivers of such locomotives must give as much space as possible for the passing of other traffic.
- (4) The whistle of the locomotive must not be sounded for any purpose whatever; nor the cylinder taps opened within sight of any person riding, driving, or leading a horse upon the road; nor shall the steam be allowed to attain such a pressure as to blow off when the locomotive is upon the road.
- (5) The locomotive must be instantly stopped on signal being given by any person with a horse or with a carriage drawn by a horse.
- (6) It must be provided during certain hours with two efficient lights in the front, and with a red light in the rear.

The speed is not to exceed four miles an hour, and when passing through towns and villages two miles. Every locomotive used on any highway must be constructed to consume its own smoke.

#### MOTOR CAR (LIGHT LOCOMOTIVE) ACTS, 1896 AND 1903.

The Locomotives on Highways Act, 1896, which came into operation on November 14th, 1896, provided that the then existing enactments restricting the use of locomotives on highways should not apply to any vehicle propelled by mechanical power if it be under three tons in weight unladen, and be not used for the purpose of drawing more than one vehicle (such vehicle with its locomotive not to exceed in weight unladen four tons), and be so constructed that no smoke or visible vapour is emitted therefrom, except from any temporary or accidental cause; and vehicles so exempted, whether loco-

motives, or drawn by locomotives, were classed by the Act of 1896 as "light locomotives," and by the Act of 1903 as "motor cars."

The Act of 1896 (now styled the Principal Act) has been supplemented and amended by the Motor Car Act, 1903, and it is provided that the two enactments may be cited together as the Motor Car Acts, 1896 and 1903. The new Act came into force on January 1st, 1904.

One of the new provisions is that the Local Government Board may, by regulations made under the principal Act, increase the maximum weights of three tons and four tons mentioned above, and as respects motor cars exceeding two tons in weight unladen, may make regulations as to speed, all such vehicles being called heavy motor cars. It may also prohibit motor cars on roads not exceeding 16 feet in width, or where motor car traffic would be especially dangerous. It is further provided that no person may drive a motor car on a public highway, or any roadway to which the public are granted access, recklessly or negligently, or at a speed or in a manner which is dangerous to the public, having regard to all the circumstances of the case.

In the case of a manufacturer of or dealer in motor cars, a County Council, on payment of an annual fee, may assign to the manufacturer or dealer a "general identification mark," which may be used for any car on trial after completion, or on trial by an intending purchaser.

No one shall drive a motor car on a public highway unless licensed, and no one may employ any person who is not licensed to drive a motor car.

A person driving a motor car shall, in any case, if an accident occurs to any person, whether on foot, on horseback, or in a vehicle, or to any horse or vehicle in charge of any person, owing to the presence of the motor car in the road, stop, and, if required, give his name and address, and also the name and address of the owner and the registration mark or number of the car.

The section of the principal Act relating to the rate of speed of motor cars has been repealed by the Act of 1903, and it is now provided that a person shall not, under any circumstances, drive a motor car on a public highway or road at a speed exceeding 20 miles per hour, nor within any limits or place

referred to in regulations made by the Local Government Board upon application of a Local Authority at a speed exceeding 10 miles per hour.

The order of the Local Government Board relating to heavy motor cars provides that if the weight exceeds three tons unladen, or if the registered axle weight on any one axle exceeds six tons, or it draws a trailer, the speed shall not exceed five miles per hour, provided that if its wheels are fitted with pneumatic or similar tyres twelve miles an hour is permitted where the registered axle weight does not exceed six tons, and eight miles per hour where such axle weight exceeds six tons.

Inasmuch as there are well over 100,000 motor cycles (and this term includes side-cars and tri-cars) registered in the United Kingdom, a few words may be devoted to them. The policy usually follows that of a private car, with the exceptions that lamps, accessories, and tyres only are insured if the cycle is also damaged or stolen—in fact, several Companies not unwisely refuse to include tyres in any circumstances, and insist upon the insured carrying the first 10/- or £1 of any loss. The rates are at present in an experimental stage.

In conclusion, I may say I look to the future of Motor Insurance without pessimism. The public are accommodating themselves to the changing nature of the traffic, drivers are becoming more expert, the construction of cars is nearer to perfection, speed and road regulations are receiving more attention than ever, and a healthy competition will, in time, improve one of the worst features, viz., the excessive cost of remedying repairs.

The delivery vans and lorries are becoming a recognised method of transport and are replacing horses everywhere very rapidly. There will be a wide field for this class of Insurance, but I am afraid that until the Companies interested are willing to combine their experiences of this particular class of risk, and adopt some uniform policy and scheme of rating, there will be many sufferers for some years to come.

I do not know what your usual practice is in Cardiff, but I have had the pleasure of a fairly wide experience of meetings of various Institutes, and I have always found that the most good has been obtained where a general discussion has taken place, which I hope will be the case this evening.



# THE LIABILITY OF THE GENERAL PUBLIC AT COMMON LAW ARISING OUT OF NEGLIGENCE.

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A SHORT RÉSUMÉ OF THE LAW FOR USE IN CONNECTION WITH  
THE CONSIDERATION OF CLAIMS ARISING OUT OF GENERAL  
COMMON LAW INDEMNITIES.

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*A Paper read before the Insurance Institute of Yorkshire,  
12th February, 1912.*

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## INTRODUCTORY.

WHEN considering what subject to adopt for the purposes of this paper, I cast about in my mind for one which would cover fresh ground, and yet be of general interest to Casualty men. Workmen's Compensation is a topic which is ever with us, and, moreover, was, I felt, barred, in view of the fact that you have in past sessions had some excellent addresses on that subject by gentlemen very much better qualified than I am. It will, therefore, be mentioned only incidentally to-night.

The number of risks which may now be insured with most Offices, and which arise out of the Common Law of our country, is growing, and it therefore occurred to me that a short statement as to the extent, etc., of Common Law Liability might not be without interest. The term I have just used, "Common Law Liability," was, however, altogether too wide to adopt as a title, but as our energetic Assistant Secretary

could not spare me much time to make up my mind, I merely limited the title by adding " arising out of negligence," which is the factor upon which most, if not all, of our various schemes of indemnity are based.

This still leaves a very wide scope permitting negligence in relation to contracts, as well as accidents arising out of negligence, to be dealt with. I shall, however, confine my remarks for the most part to the Common Law as it affects insurable risks other than that covered by a Contract Guarantee Policy. I feel that the subject at the best must be a very dull one to many, and fear that the only relief that I can attempt to give it is by citing some of the most important cases which have been decided in the Courts, many of which are of very considerable interest.

The lines which I propose to follow are to give, in the first instance, a general outline of the principles and defences under the Common Law, and then to mention any special points in connection with some particular risks as they are known by us, *e.g.*, Employers' Liability, Drivers' and Motor Car, Property Owners', Carriers', Scholars', General Third Party and Shopkeepers' Indemnities, finishing up with some remarks on the assessment of damages. To do all this in the short time at our disposal will mean, of course, that we cannot go very deeply into any of the matters which I have mentioned.

I would state, in order to avoid any chance of disappointment, that this paper contains nothing new or original. My experience compared with that of many present is, of course, extremely limited, and all that I pretend to have done is to have collected from some of the best authorities information which may be of use to some who are, like myself, learners. The best that I can hope to do in the case of my seniors in experience is to perhaps remind them of some points which, although known to them, may have temporarily slipped their memory. I fear that the paper is little more than a long list of decided cases, but my excuse must be that it is upon these that the Common Law is built up.

The principal books on which I have drawn are:—

*Indermaur's Common Law Principles.*

*Kenny's Cases on the Law of Tort.*

*Accidents in their Medico-legal Aspect*, by Douglas Knocker.

*Ruegg's Employers' Liability*, and

*The Practice of Insurance against Accidents*, by Alfred Foot.



## GENERAL PRINCIPLES.

The term Common Law means the law common and general to the whole realm, and it is wide enough to cover all our laws, including those set out in Acts of Parliament. It is generally used, however, to indicate the law other than that established by Statute, and is sometimes described as the unwritten law (*lex non scripta*). This description may be somewhat misleading, however, as a great part, if not the whole, of the Common Law is written in the records of legal customs and decisions. We shall direct our attention to-night, however, to the non-statutory law, statutes only being mentioned as they extend, modify, or regulate the previously existing law.

SCOPE OF COMMON LAW.—In biblical times a culprit was supposed to suffer the same loss or injury that he or she had caused to another, and in later times a personal chattel which was the cause of the death of a person was forfeit to the Crown usually for the relief of the bereaved relatives (if any). It was found, however, to be unsatisfactory for, say, a horse and cart to be handed over to such relatives, and the payment of “damages” was therefore substituted.

RIGHTS OF ACTION.—The first point for consideration is as to the rights which entitle a person to maintain an action at Common Law for their infringement. It is not sufficient for a person to have suffered by someone else’s action an injury, but the injury must be one considered as such by the law. For instance, if anyone digs down in the soil of his own land and incidentally deprives his neighbour of water that would otherwise percolate through the land, although this operates to the detriment of the neighbour, yet it does not constitute the invasion of a legal right, and will not form any foundation for an action (*Acton v. Blundell*).

Whenever damage or an injury is caused by negligence, however, there is always a ground of action to the party suffering thereby if there be some obligation on the part of the negligent person to use care, and for the purposes of our present consideration, therefore, the first essential in any case is to prove (or disprove, as the case may be) the existence of negligence.

NEGLIGENCE.—The term “Negligence” has been defined as “the omission to do something which a reasonable man, guided

by those considerations which ordinarily regulate the conduct of human affairs, would do; or the doing something which a prudent and reasonable man would not do.’’

Each one of us is under a legal, as well as a moral, obligation to our fellow men to so regulate our actions and the condition of property (of any description) owned by us, as not to cause injury to others or damage to their property.

If we fail in this duty, then we lay ourselves open to an action at law based on the damage or injury resulting from such failure.

**RE MOTENESS.**—The connection between the action of the defendant and the injury sustained by the plaintiff must not, however, be too remote. For instance, in the case of “*Sharp v. Powell*,” the defendant caused a van owned by him to be washed in a public highway. Owing to the gutter grating being frozen over, the water used spread over the road, and also became frozen, which caused the plaintiff’s horse to fall and break its leg. It was held that the flooding and freezing of the water was not the natural or probable result of the defendant’s action, and that therefore the damages were too remote.

**TRESPASSERS AND LICENSEES.**—The extent of the duty which we owe to others depends upon our relationship. For instance, a wilful trespasser cannot claim damages for injuries sustained while trespassing, as the law gives no compensation to wrongdoers. At the same time, even a trespasser appears to have certain rights in the event of his being injured as the result of a trap laid for him. Then again, a mere licensee has only limited rights: a good example of this is the case of “*Batchelor v. Fortescue*,” in which a man who had employment in the neighbourhood drew near to an excavation which was being made and idly watched the work of excavating and drawing up the earth, which latter was done by means of a steam crane. Owing to a defect in the crane the chain broke and let a large bucket of earth which was attached fall, with the result that the man watching the work was killed. In the resulting action in which the widow of the deceased sued the owners of the crane, it was held that the deceased was a mere licensee and that there was no contract between him and the defendant that the latter’s workman should not be guilty of negligence.

In a case where the defendant caused a stand to be erected, and the plaintiff who paid money for the privilege of viewing

ances from the stand was injured through the negligent construction of the stand, the defendant was held responsible (*Francis v. Cockrell*). It might have been otherwise, however, if the plaintiff had not paid any money, in which event he would have been in the position of a licensee.

PRIVATE GUESTS.—In the event of a person receiving visitors into his own house, the law is that they stand in the same position as mere licensees, and the host or licensor is not liable for injuries caused by defects in the construction of premises, or by their being in want of repair, nor is he liable for any injury happening from any defect of which he himself was not aware. But if he is aware of the defect, and it is not necessarily observable, it is his duty to warn his guests, and if he fails to do so, then he may be liable (*Collis v. Seldon*).

A case illustrating this is that of "*Southcote v. Stanley*," in which the plaintiff was a guest of the defendant's. When he was leaving the house a loose pane of glass fell from the door as he was pushing it open, and it cut him.

It was held that he could not recover damages as he was only a licensee, but it was intimated that if he had been at the house on business he might have recovered.

The duty which every person owes in regard to children will be fully discussed under the part of this paper referring particularly to Scholars' risks.

The question really is what amounts to "Negligence" under the particular circumstances in any case, and we may here consider a few of the leading decisions on this point.

ABSENCE OF NEGLIGENCE.—There are, of course, many accidents which are not due to negligence. For instance, if a person is in charge of a horse in the street and without any fault on his part the animal bolts, causing injury or damage, he is not legally liable; or if a vehicle skids and damages a shop window, the driver or owner of the vehicle is not liable unless the skidding was due to negligent driving.

LATENT DEFECTS.—A good example of this principle is the case of "*Redhead v. Midland Railway Company*," in which the plaintiff, who was an ordinary passenger on the Midland Company's line, was injured as the result of an accident which was due to the breaking of a tyre of a carriage wheel. It was proved by the defendants that at the commencement of the journey the carriage had been examined in the usual way, and

that the wheel was to all appearances sound, the fracture being due to a latent flaw.

In the decision of the Court, the following statement was made:—

“ This question of liability involves the consideration of the true nature of the contract made between a passenger and a general carrier of passengers for hire. It is obvious that for the plaintiff on this state of facts to succeed in his action, he must establish either that there is a warranty by way of insurance on the part of the carrier to convey the passenger safely to his journey's end, or a . . . . warranty that the carriage in which he travels shall be in all respects perfect for its purpose, that is to say, free from all defects likely to cause peril, although these defects were such that no skill, care, or foresight could have detected their existence. We are of opinion . . . . that there is no such contract entered into by the carrier of passengers, and that the contract of such a carrier and the obligation undertaken by him are to take due care (including in that term the use of skill and foresight) to carry a passenger safely. It, of course, follows that the absence of such care, in other words ‘negligence,’ would alone be a breach of this contract; and as the facts of this case do not disclose such a breach, and, on the contrary, negative any want of skill, care, or foresight, we think the plaintiff has failed to sustain his action, and that the judgment of the Court below in favour of the defendant ought to be affirmed . . . . ”

ACTIONS ARISING OUT OF CONTRACT.—This case not only illustrates the fact that an accident may occur without the existence of negligence, but it also raises the question of a Carrier's liability and liability due to breach of contract. As regards the former, the subject may be further considered under the heading of Carriers, if time permits, but, in regard to the latter, I may here mention that I do not propose to make any distinction between liability arising out of what is legally known as a Tort (*i.e.*, a wrongful act), and out of breach of contract. It is frequently difficult to draw the line between the two classes, and although most Companies restrict their risk to negligent acts of Employees and defects in ways, works, etc., this is sufficient in practice to cover tortious acts of negligence and also accidents arising from breaches of implied



contracts and from unpurposed trespass or nuisances. I will return to this later on, but would here refer to the term "Implied Contracts," which I have just used, as some Companies exclude all liability arising out of breaches of contract.

Contracts may be divided into two classes, viz.: "Express Contracts" and "Implied Contracts." The former obviously include all contracts, the terms of which are set out and agreed beforehand, whether verbally or in writing, and the latter term is applied, for example, when there is in any trade or business an established custom which, though not specifically included in any contract, is not in any way excluded. It may then fairly be implied as a part of the contract. Similarly a Carrier impliedly contracts to use reasonable care to avoid injury to his passengers.

Shopkeepers' Indemnities (other than the usual Third Party Insurances) are based on breach of implied contract or warranty, and special reference will be made to these later. It will be seen that several of the principal cases which I shall quote really arose out of breach of implied contract.

ABSENCE OF NEGLIGENCE.—In the case of "*Tillett v. Ward*," which was based on negligence, it was held that where an ox belonging to the defendant was being driven through the streets of a country town and entered the plaintiff's shop and damaged his goods, the defendant was not liable, there being no negligence on his part. This decision was based on the principle that an owner of cattle passing along a highway is not responsible if they stray on to adjoining land through its not being properly fenced off. The reverse is the case, however, if the cattle are not passing along but staying on the highway, as also if they stray from their owner's land to those of a neighbour.

A very interesting case was before the Court of Appeal only in December last. The facts were as follows:—On August 6th, 1910, at about 10.30 in the evening, the plaintiff was cycling along a road adjoining a field belonging to the defendant in which some hundred cows were kept. She passed the gate, and saw some of the cows coming out, and a little further along she saw some cows crossing the road. She slowed down to jump off, and was knocked down by the cows, one of which stood upon her and broke her leg. It was proved at the trial that the gate leading from the field to the road had become out of repair, and had been mended by having an iron hurdle wired



to the two gate-posts in such a way that the gate could be opened or lifted. No evidence was given as to by whom the gate had been opened.

The County Court Judge (Romford), after hearing all the evidence, held that under the circumstances the fact that the defendant's gate was open, and that his cows had strayed into the road and caused the accident to the plaintiff, afforded evidence of negligence, and that it was for the defendant to displace this evidence by showing that the gate was not left open by reason of any negligence on his part, or on that of his servants, and after hearing the whole evidence he came to the conclusion that the defendant had not displaced the *primi facie* case made by the plaintiff. He therefore gave judgment for the plaintiff for £75.

The defendant appealed to the Divisional Court, in which the Judges differed and dismissed the appeal. The case was then taken to the Court of Appeal, where it was decided unanimously that it had not been proved that the defendant had neglected any duty which he owed to the public (*Ellis v. Banyard*).

TRESPASS.—These points really come within the law of trespass, but the risk of the animals causing injury or damage whilst trespassing is covered by some Insurance Companies.

A somewhat unusual case is that of "*Wilkins v. Day*," the facts of which are as follows:—Day farmed land on both sides of the highway, and his employees took a roller from one of his fields across the road to the gate of a field opposite. Taking away the horses, they left the roller unattended on the grass at the roadside with the shafts turned up, but projecting a few inches over the road. Mrs. Wilkins was driving past the place when her pony shied at the roller, and she was thrown out of the trap and killed. The verdict was for the plaintiff, with £100 damages, on the grounds that—

“ All the Queen's subjects are entitled to the free and unobstructed use of the highway, and an action will lie for an injury resulting from an occupation of a part of the highway amounting to an obstruction and prevention of its free use by the public to an extent which is unreasonable.”

Some of the cases already quoted were founded on the negligence of the defendant through his servants.

LIABILITY FOR TORTS OF SERVANTS.—By reason of the Common Law maxim that “He who does a thing by another must be legally assumed to have done it himself” (*Qui facit per alium facit per se*), a person is legally responsible for the actions of an employee acting in the course of his ordinary employment and duty. This is probably what gave rise to the term “Third Party” risks, the three parties being—(1) the injured person, or the person owning the damaged property; (2) the person causing the injury or damage, and (3) the employer of the latter.

This places on an employer the obligation to exercise care in the choice of competent and experienced servants.

We may here refer to some cases illustrating how far an employer is answerable for the acts of his servants. I have mentioned that to create responsibility on the part of the employer, the servant's action must have been in the ordinary course of his duty. If a servant takes out a vehicle owned by his master, but without the instructions or authority (either expressed or implied) of his master, the latter will not be liable for any result of the servant's actions (*M'Manus v. Crickett*). Further than this, if a servant is out with his master's vehicle in the course of his employment, but after having done what was necessary for his employer he sets off on some independent enterprise, then he alone is responsible for his actions. The case is different, however, if the servant's disobedience of instructions merely amounts to the taking of a route other than that ordered, in which event the employer is regarded as still responsible for his employee's actions (*Storey v. Ashton*).

In the case of “*Limpus v. London General Omnibus Company*,” an accident was caused by the attempt of the driver of an omnibus to race another omnibus and obstruct its passage, although he had received from his employers express instructions not to obstruct other vehicles. The employers were held liable on the grounds that, although the driver's act was forbidden by the employers, it was nevertheless not so entirely outside the scope of his authority as to become his act alone, and not the act of the employers.

SCOPE OF SERVANT'S AUTHORITY.—In this case it is probable that the motive prompting the driver's action was a mixed one, being partly to gratify a feeling of vexation and partly to forward his employer's interests. The rule would appear to be,

however, that where an effective motive, though not the only motive of an employee, is to promote the employer's interests, then the employee is not acting outside the scope of his authority to an extent sufficient to relieve the employer from liability.

**ACT OF SERVANTS LENT.**—An employer is only responsible for the actions of his own servants (or servants directly under his control), and in the case "*Harris v. Fiatt Motors, Ltd.*," where a motor car driver surrendered the driving of the car to another man and an accident occurred, the employer of the former was not responsible.

**CRIMINAL ACT OF EMPLOYEE.**—An employer is not responsible for a criminally tortious act of an employee unless it is committed in the employer's interests. For instance, if A's coachman, while driving A, wantonly runs over X, no action for damages would lie against A. But if the coachman is driving very quickly in order to get A as soon as possible to his destination, and carelessly runs over and kills X, under such circumstances that he is guilty of manslaughter, A would be liable to an action for damages by the representatives of X, notwithstanding that the coachman's act was criminal in its nature. This is illustrated by the case (which has already been mentioned) of "*Limpus v. London General Omnibus Company*," where the employer was held responsible for the result of another Company's bus being overturned, owing to a wilful and wrongful act on the part of their employee.

**PARTY RESPONSIBLE.**—This leads up to the question of who is the responsible party in connection with any accident. In many instances no doubt arises, some person directly causing the accident, or the employer of such person being clearly the party liable if there be any legal liability at all. But there are many intricate cases in which it sometimes is difficult to place the responsibility. A good example of this is what is known as the "*Squib Case*," the circumstances of which I will mention:—

On the evening of the Fair day at Milborne Port, October 28th, 1770, the defendant threw a lighted squib made of gunpowder, etc., from the street into the market house, which was a covered building supported by arches and enclosed at one end, but open at the other, and at both sides. A large number of people were in the market.

The lighted squib thrown by the defendant fell upon the stall of a man named Yates who sold ginger-bread. A man named Willis, in order to prevent injury to himself and to the wares of Yates, took up the lighted squib and threw it across the market house when it fell upon the stall of another man named Ryal, who sold the same class of goods. Ryal, to protect his own goods, immediately picked up the squib and threw it to another part of the market house where it struck the plaintiff (who was in the market house) in the face, bursting at the same moment, with the result that the sight of one of his eyes was destroyed.

This case was really an action for trespass and not for a tortious act, but as far as this paper is concerned the principle we are considering is the same, and the following statement made by the Court is therefore of interest:—

“I do not think it necessary to maintain trespass, that the defendant should personally touch the plaintiff, if he does it by a mean it is sufficient. He is the person who, in the present case, gave the mischievous faculty to the squib. That mischievous faculty remained in it until the explosion. No new power of doing mischief was communicated to it by Willis or Ryal. It is like the case of a mad ox turned loose in a crowd. The person who turns him loose is answerable in trespass for whatever mischief he may do. The intermediate acts of Willis and Ryal will not purge the original tort in the defendant. . . .” (*Scott v. Shepherd*).

COMPLETED WORK.—Another case illustrating the doubt which there may be as to who is the responsible person is that of “*Francis v. Cockrell*,” already quoted, in which the party held liable for defects in a stand which had been erected for the purpose of viewing some racing, was the owner who had caused the stand to be erected, and not the contractor who erected it. This decision would appear to be based on the contractual relationship which existed between the injured person who paid money for the privilege of using the stand and the owner who received the money and thereby impliedly warranted that the stand was in a fit and safe state for use.

CONTRACTUAL RELATIONSHIP.—I have said that I do not propose to draw any distinction between cases of negligence based on torts and those concerning contracts, but it may here be mentioned that for any action to be successful for breach of

contract there must have been "privity," *i.e.*, a contractual relationship, between the parties, but in an action for tort (using the term as signifying an injury arising independently of contract) no privity between the parties is necessary, the right of action existing simply because of the withholding or violation of some right. Some circumstances may give the alternative rights of an action under the law of tort and an action for breach of contract.

The case last mentioned illustrates the requirements in an action arising out of contract, and it is interesting to compare with that case the decision in the well-known case of "*Heaven v. Pender*," decided by the Court of Appeal in 1883:—

CONTRACTOR OR SERVANT.—In this case the plaintiff was employed by a contractor who had contracted with a shipowner to paint a ship which was lying in the defendant's dry dock. The defendant had contracted with the shipowner to erect a staging round the ship for the purposes of the painting, which staging it was known would necessarily be used by the painter and his workmen. One of the ropes of the staging was defective, and the defendant was guilty of negligence in supplying this rope for the purpose. While the plaintiff was standing on the staging engaged in painting the ship, the rope broke and he was injured.

The defence took the line that the defendant who erected the staging had contracted only with the shipowner, and that, therefore, there was no "privity" between himself and the plaintiff, who was the employee of a third person, but the Court appear to have based their decision on the law of tort, and held the defendant liable. In stating their decision, Lord Esher laid down the following general and very important principle:—

"The proposition which these recognised cases suggest, and which is therefore to be deduced from them is, that whenever one person is by circumstances placed in such a position with regard to another that every-one of ordinary sense who did think, would at once recognise that if he did not use ordinary care and skill in his own conduct, with regard to those circumstances, he would cause danger of injury to the person or property of the other, a duty arises to use ordinary care and skill to avoid such danger."



CONTRACTOR'S LIABILITY TO THIRD PARTY.—Although this statement is of great importance, yet the proposition laid down is very wide, and it has not been invariably followed. For instance, so recently as the year 1905, a case was decided in the Court of Appeal which appears to conflict with "*Heaven v. Pender*." A coach-builder, the defendant, had contracted with the plaintiff's employers to keep in repair for them certain vans. Owing, as was alleged, to the negligent way in which the repairs were executed, the plaintiff whilst driving the van in the course of his duty was injured.

The Court held that the coach-builder was under no duty to the plaintiff (he having contracted only with the plaintiff's employers), and that the circumstances disclosed no cause of action (*Earl v. Lubbock*).

Where there are more than one employer, the one who has control of the workmen is responsible for their actions. This applies to the lending of workmen, and to sub-contracting. When a contractor employs a sub-contractor to carry out certain work, and the latter employs his servants for the work, the original contractor is not liable for the negligence of such servants, unless he interferes and assumes specific control (*Cuthbertson v. Parsons*). If the original contractor supplies some part of the plant he may be liable for accidents due to defects in such plant.

CONTROL BY EMPLOYER.—Examples of how the principal contractor may retain sufficient control to be responsible for the negligent acts of a sub-contractor's employees, are given in the cases of "*Levering*" and "*Doe v. The London and St. Katherine's Docks Company*." In these cases, which were identical, the sub-contractors undertook to discharge ships by means of their own "*gangs*," using the Dock Company's gear, and agreed that they would be liable for all accidents happening to members of their "*gangs*." They selected their "*gangs*" from men supplied by the Dock Company, with tickets to enable them to enter the Dock premises, and their names were entered on the Dock Company's books as permanent workmen.

Two of the workmen were injured and brought actions against the Dock Company, and it was held by the Court of Queen's Bench (reversing the County Court decision) that the Dock Company had retained sufficient control to render themselves liable.

Cases on this point, some decided one way and some the other, could be multiplied if time permitted.

EMPLOYEES LENT TO THIRD PARTY.—I referred to the position when an employee is lent by one employer to another, and a good instance is that of a job-master who lets out a vehicle, and provides a driver who is to drive according to the directions of the hirer. Under such circumstances the job-master does not place his employee under the control of the hirer otherwise than as regards the destination to be approached, and route to be taken, and he therefore remains responsible for the employee's actions (*Quarmen v. Burnett*). But if he let out a vehicle and horses, the hirer providing his own driver, the job-master would not be liable for the actions of the driver (*Laugher v. Pointer*). This principle may, of course, also be applied to the hiring of motor cars.

The case may be different from that above suggested in the case of the job-master supplying a driver, if all control of the employer is handed over to the hirer. For instance, in the recent case of "*Perkins v. Stead*," the defendant purchased a motor car in London from the Argyll Motor Company, who agreed to provide a driver to drive the car to a certain place outside London and deliver it there, as the defendant's driver did not know the locality and had no experience of the class of car purchased.

While the car was being driven by the driver so supplied by the Argyll Company, from London to the place of delivery, it collided with and damaged a motor bicycle, owing to the negligence of the driver. At the time the defendant, his son, and the driver were in the car.

In an action in the County Court by the owner of the bicycle against the defendant, the Judge held that the driver of the car, although he was the general servant of the Argyll Company, was at the time under the control of the defendant, who had the possession of the car, and that therefore the defendant was liable to the plaintiff for the negligence of the driver.

FATAL ACCIDENTS' ACT, 1846.—Before proceeding to consider the defences which may be set up to Common Law actions, may I refer briefly to the Fatal Accidents' Act, 1846, sometimes spoken of as Lord Campbell's Act.

It is a Common Law principle (of general but not invariable application) that "a personal action dies with the person"

(*Actio personalis moritur cum persona*). The effect of this was (and still to a less extent is) that in many cases if the person who has sustained an injury owing to negligence on the part of someone else, dies before having enforced his rights, the injury is considered to have expired with him. Similarly if the person guilty of negligence dies before the injured party has enforced his rights, the right to a remedy is ended. Generally speaking, this principle applies in circumstances affecting persons, but not in circumstances affecting property. By the Civil Procedure Act, 1833, executors may sue for any injury to the real property of a deceased person, and also executors may be sued for all injuries done to the real or personal property of a plaintiff. But the principle prevented the relatives of a deceased person taking action for personal injury (whether connected with the death or not) caused to the deceased by someone else's negligence, and also prevented the injured party from obtaining any redress if the person guilty of negligence had died from any cause.

Lord Campbell's Act provides (to use the actual wording) that:—

“Whosoever the death of a person shall be caused by wrongful act, neglect, or default, and the act, neglect or default is such as would (if death had not ensued) have entitled the person injured to maintain an action and recover damages in respect thereof, then, and in every such case, the person who would have been liable if death had not ensued shall be liable to an action for damages, notwithstanding the death of the person injured, and although the death shall have been caused under such circumstances as amount in law to a felony.”

**TIME LIMIT.**—It is a condition that the action must be commenced within twelve months of the death of the injured person, by the executor or administrator, or by any person for whose benefit such action might be brought by an executor. (The latter is an extension made by Lord Campbell's Act Amendment Act.)

**BENEFICIARIES.**—The persons who may be beneficiaries under the Act are wife, husband, parents (including step-parents and grandparents) and children (including step-children and grandchildren).

This law will be further mentioned when we come to deal

with the assessment of damages, but I would point out that the old maxim "That an action dies with the injured person" (*Actio personalis moritur cum persona*), still holds good when the injured person dies otherwise than as a result of the injury which might give rise to the action.

This is an important point, as also is the fact that the relatives of a deceased person have no rights which the deceased would not have had had he lived. This means that every defence which would have been available against an action brought by the injured person may be used in the event of an action by his executors, or relatives.

The Act does not apply to Scotland, it being unnecessary for it to do so owing to the fact that under the Common Law in Scotland a claim for solatium has always been allowed to certain near relatives of a person whose death had been occasioned by negligence. The relatives are limited to legitimate children, parents, husband, and wife.

Such a claim may be sustained even though the relative is unable to show any direct pecuniary loss resulting to him from the death.

#### DEFENCES.

Having said so much respecting the Fatal Accidents' Act, I propose now to mention the principal defences which may be set up in a Common Law action.

**DENIAL OF NEGLIGENCE.**—The most important defence is, of course, a denial that there was any negligence on the part of the defendant. This is really a question of fact for the Jury to decide, bearing in mind the definitions which have been given to the term negligence. If the defendant has taken any action which a "reasonable man, guided by those considerations which ordinarily regulate the conduct of human affairs," would not take, or has failed to do anything which such a reasonable man so guided would do, then there are grounds upon which the Jury may find the defendant liable for damages.

We have already considered the question of what is negligence, and I propose to again refer to the subject under the heading of scholars. We need not therefore go further into it at this point.

**ONUS OF PROOF.**—Generally speaking, the onus is upon the plaintiff to prove the defendant's negligence, but there is a class

of cases in which it is unnecessary for negligence to be proved by the plaintiff, but rather it is for the defendant to disprove negligence, the causing of the injury alone being *prima facie* evidence of negligence. This principle is expressed in the maxim, "*Res ipsa loquitur*" (the thing speaks for itself); and a case illustrating the principle is that of "*Byrne v. Boadle*," in which the defendant's servants were engaged in lowering by means of certain machinery barrels of flour from an upper storey of the defendant's premises to a cart standing in the road. The plaintiff was passing the premises when a barrel fell on the top of him. No evidence of negligence was put forward, but it was held that the very fact of the barrel being allowed to fall implied negligence on the part of the employees.

There is another kind of case in which it is not even necessary for there to be an inference of negligence. This class includes those cases in which injury or damage is caused by animals, or forces of nature kept or collected by some person responsible. As an instance of the former, I should like to quote an old case which is a good example, and which is also of interest owing to the quaint way in which the report is worded. The case is that of "*May v. Burdett*." I give the wording as it appears in Douglas Knocker's book, to which I alluded at the outset.

CARE OF ANIMALS.—Burdett kept a vicious monkey unconfined, and he well knew that it was of a mischievous and ferocious nature, and was used and accustomed to bite mankind. In consequence of the monkey's behaviour, Stephen May and Sophia, his wife, brought an action for damages, for that on September 2nd, 1844, the said monkey did attack, bite, wound, lacerate, and injure the said Sophia, then and still being the wife of the said Stephen May, whereby the said Sophia became and was greatly terrified and alarmed, and became and was sick, sore, lame, and disordered, and so remained and continued for a long time.

The Jury awarded £50 damages, and Burdett appealed on the ground that they had not alleged that he had been negligent in not keeping the monkey secured. This, however, was held not to be necessary, Lord Dennen stating that:—

“Whoever keeps an animal accustomed to attack and bite mankind, with knowledge that it is so accustomed, is *prima facie* liable in an action on the case at the suit of any person attacked and injured by the animal,



without any averment of negligence or default in the securing or taking care of it. The gist of the action is the keeping of the animal after knowledge of its mischievous propensities. But the conclusion to be drawn from an examination of the authorities appears to us to be this, that a person keeping a mischievous animal with knowledge of its propensities is bound to keep it secure at his peril, and that, if it does mischief, negligence is presumed, without express averment."

In the case of animals not of a nature likely to do injury, such as dogs, the general rule is that owners are responsible for injury done by them if they were previously aware that their animals were of a ferocious nature. But this is now qualified by the Dogs Act, 1906, which enacts that:—

"The owner of a dog shall be liable in damages for injury done to any cattle by that dog, and it shall not be necessary for the party seeking damages to show a previous mischievous propensity in the dog, or the owner's knowledge of such previous propensity, or to show that the injury was attributable to neglect on the part of the owner."

The term "cattle" is defined as including horses, mules, asses, sheep, goats, and swine. As human beings are not included in the definition, it appears that a dog may have two bites of human flesh (or of the trousers covering the same) before the owner is responsible, whereas the first bite of meat renders the owner liable!

**FORCES OF NATURE.**—The other type of case which I mentioned, in which proof of negligence is not necessary, viz., cases arising out of the collecting of forces of nature, is illustrated well by the decision in "*Rylands v. Fletcher*," the circumstances leading up to which were that Rylands wished to have a reservoir for his mill, and to make it he employed competent workmen. When the reservoir had been made and filled up with water it escaped into Fletcher's mine, which was entered under some disused shafts. Fletcher sued for the damage done to his mine, but Rylands said that he had not been negligent, but had, on the contrary, used all the care he could in building the reservoir, and in employing efficient workmen, so he should not be held liable.

**ABSENCE OF NEGLIGENCE NO DEFENCE IN SOME CASES.**—It was held, however, that negligence was not material as Rylands

had collected dangerous forces. The case was stated by Judge Blackburn as follows:—

“ The person who, for his own purposes, brings on his land and collects and keeps there anything likely to do mischief if it escapes, must keep it at his peril, and if he does not do so is *prima facie* answerable for all the damage which is the natural consequence of its escape. He can excuse himself by showing that the escape was owing to the plaintiff’s default, or perhaps that the escape was the consequence of *Vis major*, or the “ Act of God,” but as nothing of this sort exists here, it is unnecessary to enquire what excuse would be sufficient. . . . But for his act in bringing it there, no mischief could have accrued, and it seems but just that he should at his peril keep it there so that no mischief may accrue, or answer for the natural and anticipated consequences. And, upon authority, this we think is established to be the law, whether the things so brought be beasts, or water, or filth, or stenchess.”

ACT OF GOD.—For purposes of comparison, may I quote a very similar case in which, however, the “ Act of God ” defence proved successful. The case is that of “ *Nichols v. Marsland*.”

On the defendant’s land were ornamental pools containing large quantities of water. These pools had been formed by damming up with artificial banks a natural stream, which rose above the defendant’s land and flowed through it, and which was allowed to escape from the pools successively by weirs into its original course. An extraordinary rainfall caused the stream and the water in the pools to swell, so that the artificial banks were carried away by the pressure, and the water in the pools being thus suddenly let loose, rushed down the course of the stream and injured the plaintiff’s adjoining property. The plaintiff having brought an action against the defendant for damages, the Jury found that there was no negligence in the maintenance or construction of the pools, and that the flood was so great that it could not reasonably have been anticipated, though, if it had been anticipated, the effect might have been prevented.

VIS MAJOR.—It was held by the Court that this was in substance a finding that the escape of water was caused by the “ Act of God,” or *Vis major*, and that the defendant was not liable for the damage. This case was distinguished from that

of "*Rylands v. Fletcher*" (which I previously quoted) in that it was not the act of the defendant in keeping the reservoirs or pools, an act in itself lawful, which alone led to the escape of the water, but the *Vis major* of the water caused by the flood which, superadded to the water in the reservoir (which in itself would have been innocuous), caused the disaster.

ACT OUTSIDE SCOPE OF SERVANT'S AUTHORITY.—A second possible defence open when an attempt is made to hold an employer responsible for the acts of his employee is that the employee was acting outside the scope of his authority. This we have already considered, when I quoted the cases of "*M'Manus v. Crickett*," where a servant took out his employer's vehicle without his consent or knowledge, and the employer was, therefore, not liable, and "*Limpus v. General Omnibus Company*," where a bus driver acted contrary to instructions, but the employers were nevertheless responsible, and other cases. I need not, therefore, spend further time on this defence.

VOLENTI NON FIT INJURIA.—A third defence is that expressed in the maxim "*Volenti non fit injuria*," which may be translated: No injury is done to a willing or a consenting party. This is illustrated by a case in which a cooling vat in a brewery was inefficiently guarded and the plaintiff was injured by falling into it as a result. He was fully aware of the defect beforehand, and it was held by the Court of Appeal that he had consented to run the risk and could not, therefore, recover damages for the injury (*Thomas v. Quartermaine*).

In another case a workman was injured by a vicious horse which he was employed to drive. He previously knew of its vice, and he complained of having to drive it. On this account the Court held that he had not consented to run the risk, and the owners of the horse were held liable (*Yarmouth v. France*).

This defence is particularly open for use in actions by workmen against their employers. Another defence in such cases is that of "Common Employment," to which reference will be made under the heading of Employers' Liability.

CONTRIBUTORY NEGLIGENCE.—This last defence to which I propose to refer is the very important one of "Contributory Negligence." If a defendant can show that although he was himself guilty of negligence, yet the accident would not have occurred had the plaintiff used reasonable care, he may

altogether evade liability. This is a general principle which does not apply (or at all events applies to only a limited degree) in the case of injuries to children. This aspect I will deal with later.

There are a large number of cases decided on the point of contributory negligence. One which well illustrates the general principle is that of "*Butterfield v. Forrester*," in which the defendant wrongfully and negligently obstructed the highway. The plaintiff, who was riding a bicycle, violently collided with the obstruction and was injured. He proceeded against the defendant, who was undoubtedly guilty of negligence, but he was not awarded damages because if he had himself exercised reasonable care he would not have sustained the injury, notwithstanding the defendant's negligence.

But the fact that one person has been negligent in some way that may lead to an injury to himself or damage to his property does not absolve other persons from the duty of using care. This is shown by the decision in "*Davies v. Mann*." The plaintiff negligently turned his donkey loose on the public highway to graze with its legs "hobbled." The defendant drove along the road and negligently ran over the donkey, which could not get out of the way. The defendant relied upon the defence that the owner of the donkey was guilty of contributory negligence in leaving the beast on the highway hobbled, but it was held that the plaintiff was entitled to recover, on the grounds that the defendant could have avoided the accident by the use of ordinary care.

Thus the rule of contributory negligence is qualified by another which arises out of it. It is rather difficult to state lucidly, but it may be expressed thus: If when a plaintiff has been guilty of negligence, even of negligence which, but for the opportunity afforded by circumstances to the defendant of avoiding its effects, would have been a direct cause of the injury, and such opportunity is afforded to the defendant and he neglects it, the plaintiff's negligence no longer disentitles him from recovering a verdict, for under the circumstances the defendant's negligence must be regarded as the direct cause of the occurrence.

MEANING OF ACCIDENT.—A defence which is not open to a defendant in a Common Law action, but which it might be necessary for an Insurance Office to take up in interpreting the



terms of its policy, is that the injury or damage was not due to an "accident." As, however, the question, What is an Accident? is one which might almost form the subject of a whole paper, and, moreover, it has been so fully dealt with in connection with Workmen's Compensation, I do not propose to spend time in going into that subject to-night, beyond stating that damages may under certain circumstances be recovered for personal injuries sustained without there having been an actual physical contact, such as a blow or collision.

For instance, if in endeavouring to escape being run into by a negligently-driven vehicle a person were to fall and sustain an injury, although not actually run into, a claim would nevertheless lie against the driver or owner of the vehicle. Even mental shock may give a right to damages if physical injury be caused by the shock. This is illustrated by the case of "*Dulieu v. White*," in which the plaintiff, who was in a state of pregnancy, was serving behind the bar of her husband's public-house when a pair-horse van was negligently driven against the building, and the horses partly entered through the doorway.

The mental shock was responsible for the premature birth of the child, and the plaintiff became seriously ill. It was held that whatever might be the position if such a person voluntarily incurred the risk of traffic in the street, she certainly had a right to personal safety in her own home, and damages were awarded.

I may also mention that if, owing to a person's negligence, another person is compelled to choose between two evils, and in so doing suffers an injury, the former may be liable. This is shown by the case of "*Jones v. Boyce*," in which the plaintiff jumped off the defendant's coach because of the negligent manner in which it was being driven. His leg was broken, and the defendant was held liable for damages.

We have now noticed the main principles of and defences under the Common Law, and I propose briefly to refer to some special points which arise in connection with the different kinds of Common Law risks as they are known to and handled by Insurance Companies.

In the main, the application of both principles and defences is apparent.



## EMPLOYERS' LIABILITY.

DEFENCES.—To take them in alphabetical order, the first calling for mention is that of an employer's liability. The principles, as I have stated them, apply, generally speaking, in the case of an employee receiving injuries as a result of negligence on the part of the employer, which negligence may consist of some act done, or omitted to be done (such as omission to guard machinery), by the employer, or neglect on his part to exercise care in the selection of competent workmen. All the defences which we have considered are also open to the employer, that is to say, he may plead in defence:—

1. That the act of the servant causing the injury was committed wilfully.
2. That the servant, when he occasioned the injury, was not acting within the scope of his employment.
3. That the injury was unavoidable and not caused by negligence.
4. That the injured person was a trespasser, or mere licensee.
5. That the injured person was guilty of contributory negligence.
6. That the injured person voluntarily incurred the risk which caused the injury (*Volenti non fit injuria*).

COMMON EMPLOYMENT.—In addition to these six means of defence, an employer has another which is usually termed that of "Common Employment." This defence, which really grew up out of the maxim already referred to, that "No injury is done to a consenting party," was based on the legal assumption that when a man enters any employment he knows that want of care on the part of a fellow-workman may be injurious or fatal to him, and that against such want of care his employer cannot protect him. The result of this was that a master was not responsible for the negligent acts of his servant if such negligent acts caused injury only to fellow-employees.

It does not matter whether or not the injured employee is in the same grade of employment as the person causing the injury, the chief engineer of a vessel, for instance, having been held to be in common employment with an ordinary seaman (*Searle v. Lindsay*), but it is necessary that the two employees should be in the service of a common master. For example, the employee of a contractor who has undertaken to unload railway trucks

is not in common employment with the Railway Company's employees, who may be doing similar work in the vicinity (*Turner v. Great Eastern Railway*).

This doctrine of Common Employment was the principal factor responsible for the passing of the Employers' Liability Act, 1880, the provisions of which Act scarcely come within the scope of this paper.

This is all that time will permit me to say regarding the liability of an employer arising out of Common Law.

#### PUBLIC AUTHORITIES.

Corporations and Councils may incur liability for injuries to the public caused in a variety of ways. Accidents may be caused by horses and carts, or motor vehicles owned by them, by negligence in carrying out building or roadway operations, by negligence in the manner such work is executed, or by negligence in not keeping the roads under their control in a state of repair.

As regards the first two possibilities suggested, these risks are not peculiar in any way to Public Authorities. The question of whether any work has been carried out in such a way as to become a public danger is one to be decided on the particular facts, and damages may be recovered if the case be proved, but as regards my fourth suggested cause of accidents, it is of importance to note that no action can lie against any Road Authority for an injury caused by a mere omission to keep the road in repair (*Ellis v. Sheffield Gas Company and Shoreditch Corporation v. Bull*).

A Public Authority can be made liable for damages if guilty of misfeasance, but not if guilty of non-feasance. This is very clearly illustrated by the judgment in the case of "*M'Clelland v. Manchester Corporation*," which was decided in the King's Bench Division a few months ago. I therefore think it worth while to give the following full report of the circumstances:—

The plaintiff in this case, in the King's Bench Division, claimed damages for personal injuries sustained while driving in a motor car along Sunderland Street, Manchester. This street was dedicated to the public by its then owner, about the year 1897. At that time the road led up to the brink of a deep and precipitous ravine which had never been fenced, and was

only used to some extent by persons going to some houses built on it. In 1904, under powers conferred on them by a local Act, the defendants made up, flagged, and kerbed this road as a new street, close up to the ravine, and about the same time they lighted it. It was lighted by ordinary gas lamps, the last of which was near the edge of the ravine, and there was evidence that this light was insufficient to reveal the ravine. Across the ravine, in the same line with and on the same level as Sunderland Street, was a road called Windsor Road, also under the defendant's control, and there was a lamp in this road approximately the same distance from the above-mentioned lamp in Sunderland Street at the edge of the ravine, as the latter was from the next lamp in the same street, so that the effect to one coming along Sunderland Street at night was that that street and Windsor Road appeared to be one continuous lighted street.

The plaintiff, whilst being driven along Sunderland Street at night at a moderate pace, fell into this ravine and was injured, the damages being agreed at £250.

The Jury found that the road as made up was a danger to persons lawfully using it, that the ravine was a hidden trap to persons using the road, that the defendants had not taken proper steps to warn the public as to the existence of the danger, that the defendants by what they had done invited the public to pass along the whole road as being a proper highway, and that there was no contributory negligence.

It was held that the defendants had been guilty of misfeasance and not of non-feasance. Where a local Authority makes up a road and omits some precaution which, if taken, would have rendered the work done safe, that is misfeasance, and they would be liable. If the defendants had left the road as they found it, and had omitted to fence or light the ravine, or to warn the public, it would have been non-feasance on their part, and they would not have been liable, but having undertaken the work the case was different. The defendants' liability was not altered by the fact that the public took the road over in the state as it was dedicated. The fact that the making up, etc., was done under statutory powers did not protect the defendants, if, as was the fact, it could with reasonable and proper care be done without injury to others. With regard to the insufficient lighting, if that was the cause of the accident, it did not come within the doctrine of non-feasance, as it had nothing to do with the non-repair of a highway.

He therefore gave judgment for the plaintiff.

A class of Common Law indemnity, which is at the present time rather much to the fore is that relating to the

#### LIABILITY OF PROPERTY OWNERS.

HOUSING OF WORKING CLASSES ACT, 1890.—This liability is itself nothing new. The old maxims and doctrines have always applied to owners of property precisely in the same way as to other persons, and the same defences are open to them. In the case of "*Lane v. Cox*," it was stated that there is no duty imposed on a landlord by his relation to his tenant, not to let an unfurnished house in a dilapidated condition; because the condition of the house is the subject of contract between them, and that therefore the landlord cannot be held liable for injuries sustained by a stranger invited or admitted into the house by the tenant.

This case was decided in 1896 before the passing of the Housing Act, 1909, to which I would refer. Mention may first be made of the Housing of the Working Classes Act, 1890, Section 75 of which stipulates that:—

“In any contract made after the 14th day of August, 1885, for letting for habitation by persons of the working classes, a house or part of a house, there shall be an implied condition that the house is at the commencement of the holding in all respects reasonably fit for human habitation.”

This implied warranty applied to houses let at an annual rent not exceeding £20 in London, £13 in Liverpool, £10 in Manchester or Birmingham, and £8 elsewhere.

HOUSING, ETC., ACT, 1909.—The same principle in an extended form is embodied in the Housing and Town Planning, etc., Act, 1909, which, by Sections 14 and 15, stipulates that there shall be an implied warranty to the same effect in letting a house at an annual rent not exceeding £40 in London, £26 in a Borough or Urban district with a population of 50,000 or upwards, and £16 elsewhere. The extension in the principle is that it shall be an implied condition that the house shall be *kept* by the landlord in all respects reasonably fit for human habitation.

These provisions may, at first glance, appear very innocent, but they have a serious effect. The Housing Act does not (as

some people I have met appear to think) create a new responsibility for owners of house property, and it is in no way a compensation law, but the effect of the clauses to which I have referred would appear to be to deprive the owner of the defence that he has not been negligent in any action between himself and his tenant.

In the case of property other than that specified as coming within the scope of the clauses to which I have referred, and also in actions between himself and persons other than tenants, an owner may have a good defence to an action if he can show that he was unaware of the defect, and had not been negligent in not discovering it, and he could raise such a defence in the case of an action arising out of defects in property now within the scope of the Act before that law came into force. But now he is assumed to know the condition of his property, and, if he does not know, this fact alone may be taken as evidence of negligence. This will presumably apply even if the claimant knew of the defect and failed to report it.

INSPECTION OF PROPERTY.—For this reason it is of great importance that property owners should arrange for a thorough examination of their property to be made regularly. It is not sufficient, for example, for the rent collector to take a casual glance at the property, as he cannot so ascertain a flaw in the chimney stacks or slating.

The liability of the property owner towards his tenants would seem to be based on breach of an implied contract, and not on the law of tort. Another class of risk based on contract which is insured by only a few Offices (and for this reason I shall refer only briefly to it) is the

#### SALE OF GOODS.

Section 14 of the Sale of Goods Act, 1893, which Act is based on the Common Law, states that:—

1. Where the buyer, expressly or by implication, makes known to the seller the particular purpose for which the goods are required, so as to show that the buyer relies on the seller's skill and judgment, and the goods are of a description which it is in the course of the seller's business to supply (whether he be the manufacturer or not), there is an implied condition that the goods shall be reasonably fit for such purpose. . . . .



2. Where goods are bought by description from a seller, who deals in goods of that description (whether he be the manufacturer or not), there is an implied condition that the goods shall be of merchantable quality.
3. An implied warranty or condition as to quality or fitness for a particular purpose may be annexed by the usage of the trade.

I do not propose to take up your time by discussing these provisions, but will content myself with quoting three cases which typify the application of the law:—

**HOT-WATER BOTTLE.**—In “*Priest v. Last*,” a rubber hot-water bottle burst on the fifth day of use, and scalded the purchaser’s wife. An analysis showed that there was very little pure rubber in it. Held: “There was an implied warranty that it was fit for its purpose, and the defendant was liable because it was not fit.”

**STONE IN BUN.**—In “*Chapronière v. Mason*,” the plaintiff bought a bun and bit on a stone in it, which broke his decayed tooth, and in consequence he had an abscess in his jaw. The Jury found that there was no negligence, and that the bun was reasonably fit and of a merchantable quality, but the Court of Appeal ordered a new trial, the Master of the Rolls observing that he should be inclined to say that such a bun was not reasonably fit for mastication. “The unexplained presence of the stone is *prima facie* evidence of negligence on the part of the person who made the bun. . . .”

**CONTAMINATED MILK.**—In the third case, “*Frost v. Aylesbury Dairy Company*,” the plaintiff purchased milk for the consumption of himself and his family. The milk contained germs, the wife died of typhoid caught from the milk, and the plaintiff claimed damages up to the date of his wife’s death. It was held by the Jury that the plaintiff relied on the seller’s skill and judgment, and in so relying suffered the damages claimed. He was accordingly awarded damages, and the judgment was upheld in the Court of Appeal.

#### SCHOLARS AND YOUNG PERSONS GENERALLY.

**NEGLIGENCE.**—I should now like to refer to the liability of Educational Authorities and School Teachers for accidental injuries sustained by scholars, either as a result of personal negligence, or by defects in the school premises or furniture.

When considering what might legally amount to negligence earlier, I mentioned that an action which might not be considered as negligent in relation to adult persons might be deemed otherwise in relation to children.

An example of how circumstances which would not enable an adult person injured thereby to maintain a charge of negligence, whereas an injured infant could do so, is the recent case of "*Morris v. Carnarvon County Council*." In this case the Council were held to be guilty of negligence in not having removed a swinging door, the cause of injury to an infant scholar, which had been installed, not by the Council, but by their predecessors, the School Board. Had an adult person (*e.g.*, a teacher) been injured thereby, a claim could not have arisen, but it was held on appeal, by Lord Justice Vaughan Williams, that the door was not a proper thing to have in a school for young children.

**CONTRIBUTORY NEGLIGENCE.**—A further difference between Common Law claims by adults and by infants is that, what may amount to contributory negligence in adults may not be so regarded in the case of children.

A case in which the injured person was not a scholar, but which well illustrates this point, as well as showing how an act which, but for the presence of children, would not be negligent, is so when infants are present, is that of "*Lynch v. Nurdin*," an old case. The facts were as follows:—

Nurdin's man left a cart and horse for half-an-hour unattended outside a house in a London street where children were likely to be. During this time, Lynch, a small boy, with others of his kind, started climbing into the cart and out of it. While the plaintiff was getting down from it, another boy made the horse move, in consequence of which the plaintiff fell and his leg was broken.

It was held that the defendant had been deficient in ordinary care in that, by his servant leaving the cart and horse unattended, the plaintiff was tempted to indulge the natural instinct of a child in amusing himself with an empty cart and deserted horse. Also, the plaintiff showed as much prudence and thought as can be expected from a child of his tender years, and, therefore, contributory negligence could not be set up as a defence.

Another case of the kind was "*Abbott v. MacFie*," in which

a child of seven years was injured while jumping on and off a movable wooden cellar flap which had been placed against the wall. The child was held entitled to damages against the person who so placed the cellar flap.

But when a child is in charge of an adult person, any contributory negligence on the part of the guardian may be attributable to the child. This was so in the case of "*Waite v. North Eastern Railway Co.*," where a child in the care of his grandmother was injured while crossing the railway line. The Railway Company was held to have been guilty of negligence, but as the accident was due to contributory negligence on the part of the grandmother, it was ruled that the child could not recover damages.

PARTY RESPONSIBLE.—In the case of an injury being caused to a scholar by "negligence" on the part of a teacher, it would appear that either the teacher or the body or authority employing the teacher may be liable according to the circumstances. The case of "*Smith v. Martin*," which was heard at the Leeds Assizes a few months ago, illustrates this and also the question of what may amount to negligence in the eyes of the law.

Miss Martin, who was a teacher of domestic economy at an elementary school under the Hull Corporation, sent Amy Smith, a scholar of fourteen years of age, who was in the sixth standard, to poke the fire in the teachers' room. In so doing the girl's clothing caught fire and she suffered serious injuries as a consequence.

It was stated that Amy Smith had, in the course of her education at school, been instructed in the management of stoves, and further, that she had been left at home by her mother when she (the mother) went out, with the duty of keeping the fire alight.

The Jury found, however, that Miss Martin had been guilty of negligence in subjecting the girl to the risk which was no part of her lessons, and awarded £300 damages.

The question then arose as to whether the responsible party was Miss Martin or the Corporation who employed her. The original decision on this point was that the teacher herself was liable, but this was over-ruled on appeal, when it was held that the maxim, "*Qui facit per alium facit per se*," applied, and that, therefore, the Educational Authority was liable for the negligence of its employee.

NON-PROVIDED SCHOOLS.—Whether the managers of a non-

provided school or the Local Education Authority were responsible was discussed in "*Proctor v. Sheffield Education Committee.*" The plaintiff, who was six years old, sustained an injury to one of his fingers owing to an alleged defect in the hinge of a desk which had been in use in the same condition for twenty years. The Jury found that the desk was not a suitable one for infants, the verdict being for £10.

In order to consider the question as to the responsible party, Judge Benson inquired whether the accident occurred during the period of secular instruction, or that of religious instruction. Had the latter been the case, his Honour stated that the managers might have been responsible, but as it was not so he held that the local Education Authority was liable, as, under the Education Act of 1902, it was responsible for, and had the control of, secular instruction, and, moreover, was bound to maintain and keep efficient public elementary schools, which duty included the keeping of the school premises and furniture in a proper condition.

**SUNDAY SCHOOLS.**—Public Elementary Schools, at which attendance is compulsory on the part of scholars, are probably on a different footing from schools at which attendance is voluntary, but, as illustrated by some of the cases already cited, there are certain duties imposed by Common Law upon everybody who has the care and management of children, or, in fact, who has any relationship whatever with children.

The opinion of Mr George Blaiklock, Barrister, which was obtained by the Sunday School Union, is of interest in this connection. He stated that, notwithstanding the difference which exists between compulsory schools and schools at which attendance is voluntary, he is of opinion that the managers of a Sunday School would be liable in law for any injury sustained by any child or other person lawfully using their premises, if such injury were sustained through some defect in the premises or apparatus.

Having invited the children to attend the school, there is a legal duty to see that the premises and apparatus or furniture are reasonably safe; if through a breach of that duty an accident happens and injury results, those persons responsible would be liable for damages.

I have already given more space and time to this part of our subject than I intended, but should like to quote one other

important decision, viz., that in “*Shrimpton v. Hertfordshire County Council*,” which case was before the House of Lords in February, 1911. The report is as follows:—

CHILDREN CONVEYED BY VEHICLE.—This was an appeal by the plaintiff against an order of the majority of the Court of Appeal setting aside a verdict and judgment entered in her favour at the trial. The plaintiff, Florence Shrimpton, a girl about 13 years of age, was a scholar at a public elementary school at Croxley Green. The defendants had a contract with a job-master to provide a closed conveyance in wet weather and an open brake when fine to take children who resided at Chandler’s Cross, some two-and-a-half miles from the school, backwards and forwards daily. On the way, the brake would pass by the Shrimpton’s house, and although they lived only a little over a mile from the schools, the plaintiff and one or two other children went almost daily to school by the brake with the knowledge and consent of the school attendance officer. On the day in question, as the plaintiff was getting out of the waggonette, the driver, without giving any warning, restarted the horse, with the result that the plaintiff was pitched out on her head and seriously injured.

The defendants at the trial denied liability, and pleaded that whether there was a duty upon them to send a conductor or some adult person to take care of the little children when getting in or out, there was no such duty owed to the plaintiff, who was a strong active girl, capable of taking care of herself. The action was tried at the Hertford Assizes, before Mr. Justice Channell and a special Jury, with the result that the Jury found negligence and awarded plaintiff £250 general damages and £27 special damages. On appeal (Lord Justice Vaughan Williams dissenting) the judgment was set aside on the ground that there was no evidence of any breach of duty owed by the defendants to the plaintiff. The plaintiff then obtained leave to carry the question to Their Lordships’ house in *forma pauperis*.

In this judgment the Lord Chancellor moved that the appeal should be allowed. He said that, in his opinion, there was ample evidence to support the findings of the Jury that there was negligence in not supplying a conductor to see the children safely in and out of this particular brake, which had been selected for that purpose by the school officer, but which appeared, in fact, to have not been very safe for the purpose.



It was said that in fact the parents of the plaintiff took all the risk, because the defendants were under no liability whatever to provide a vehicle at all for the conveyance of children living so near the schools as the Shrimptons did, but the attendance officer certainly had authority to say which children should use the brake, and there was evidence here that he had sanctioned the Shrimpton children being taken to and from the school in that way. They, therefore, were invited to ride, and the defendants could not escape liability by saying they were mere volunteers.

The other noble and learned lords concurred, and the appeal therefore was allowed, with such costs there and below as are allowed in pauper cases.

I have quoted these cases relating to scholars somewhat fully because some of the principles involved may be equally applied to street accidents involving injuries to minors, which form so large a proportion of the Third Party claims which arise.

#### TRANSIT RISKS.

We now come to what I suppose are responsible for much the greater proportion of the income of Offices in connection with Common Law risks, viz.: driving and general vehicular indemnities, including motor car insurance. As, however, my time is running out, we must pass over this class of risk to which all the principles and defences which we have considered are applicable.

As a rule, policies issued in respect of vehicles licensed to carry passengers exclude claims by passengers, but the risk is sometimes included, and I would therefore refer to the decision of the Court in the case of "*Redhead v. Midland Railway Company*," which I quoted in full earlier.

CARRIERS.—Carriers are not insurers of their passengers, their contract being only to carry safely and securely so far as by reasonable care and forethought is possible. They must have failed in this before an action can be brought against them.

#### GENERAL THIRD PARTY RISKS,

such as Builders' and Tradesmen's generally, must also be passed over, as there is scarcely time to consider the final part of our subject.

I may mention, however, that in the case of anyone leaving an obstruction on a public road or path, action may be taken either on grounds of trespass or that a nuisance has been created, and not on account of tortious negligence.

As I have already mentioned, however, an Insurance Company, insuring the defendant against claims arising out of his employee's negligence, would not repudiate liability under their policy if from their point of view their insured's employees had been negligent in carrying out their work. But the Company would be warranted in repudiating liability if the obstruction had been caused with the insured's approval, or even knowledge.

#### DAMAGES.

I propose to close my remarks with a short reference to the assessment of damages.

The term "Damages" has been defined as a pecuniary compensation recoverable by action for breach of contract, or in respect of a tort.

LIQUIDATED OR UNLIQUIDATED.—Damages may be "liquidated" or "unliquidated." By the former term is meant compensation of a fixed amount agreed upon beforehand, such as in the case of the conditions drawn up before the completion of a contract agreement. In all cases of tort, however, the damages claimed are necessarily unliquidated.

NOMINAL.—"Nominal" damages may be awarded when a person has sustained a legal injury, but is not pecuniarily any the worse off as a result.

GENERAL.—"General" damages is the term applied in cases where the injury sustained cannot be estimated except by ordinary opinion and judgment.

SPECIAL.—Where there is substantial and real injury reasonably or probably caused by the defendant, the damages awarded are "special" damages.

An action and recovery for the results of a tortious act prevent the injured person from bringing any further action based on the same tort, even if he sustains further injury which he could not foresee.

MOTIVES OF DEFENDANT.—In actions based on tort, the motives of the defendant may be taken into account in assessing the damages, and any species of aggravation will give ground

for additional damages. For instance, if two separate torts are committed, the one hastily and perhaps unintentionally, and the other premeditated and accompanied by insulting expressions, heavier damages might be awarded in the latter case, even though the resulting injury were the same as in the former case.

**VINDICTIVE.**—When an action for tort is brought in the interests of the public for the sake of example, the Jury may be justified in giving damages quite beyond any possible injury sustained by the plaintiff. Such damages are termed “vindicative.” In this way the rules regulating the assessment of damages for tort are much looser than those applying in the case of breach of contract.

**SOLATIUUM.**—Damages may be based not merely upon the plaintiff’s pecuniary loss arising out of the injury, but also upon the extent and severity of the mental pain and physical suffering which the plaintiff has suffered as a solatium.

**PECUNIARY LOSS.**—The case is different, however, when a claim is made by relatives of the injured person under the provisions of the Fatal Accidents’ Act, 1846. The damages in such a case must be calculated in reference to a reasonable expectation of pecuniary benefit, as of right or otherwise, from the continuance of the life. This means:—

“That the Jury cannot speculate on mere probabilities of advantages that might possibly have ensued to the persons for whose benefit the action is brought, nor can they look to the grief caused such persons by the death, but they may consider the fair loss of comforts and conveniences to such parties through the death, for this is fairly within the pecuniary loss for which the action is brought” (*Franklin v. South Eastern Railway Company*).

The way in which the general ruling which I have quoted may be stretched is shown by the case of “*Pym v. Great Northern Railway Company*,” in which a widow claiming damages on behalf of herself and children for the loss of her husband, based her claim on their immediate loss, and also on “the loss of that provision which it was to be presumed that the deceased, as a prudent father of a family, would have made by saving from his income for the benefit of his wife and younger children.”

This claim was upheld, damages amounting to £13,000 being awarded. The amount was, however, reduced to £9,000 by the Court of Appeal.

### CONCLUSION.

I fear that, in endeavouring to cover too wide a ground, I have seriously laid myself open to the charge of "scamped" work. I trust, however, that some of the matter here collected together may have been of a certain amount of interest to some present.

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# THE CONTRIBUTION CLAUSE IN A FIRE INSURANCE POLICY.

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By JOHN BODEL, Fire Loss Assessor, Belfast.

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*A Paper read before the Insurance Institute of Belfast,  
14th November, 1912.*

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THIS paper will deal principally with the Contribution Clause in a Fire Insurance Policy, but so closely connected is that Clause to Subrogation, Indemnity, and Average that it becomes necessary to touch upon these subjects as well. Contribution will, however, be the theme as far as possible.

You are all aware that each Company's Policy has its own particular Conditions, but all Policies (with the exception of those issued by a well-known Corporation of Underwriters), whilst they may omit other Clauses, invariably include the one known as Contribution. Now this is such a simple-looking and apparently easily understood Condition in a Fire Policy that it is often passed over with a cursory glance, few deigning to waste time or thought upon its bearing. But is it so simple or so easily understood as it looks? Upon closer examination, it is not, for there is no other Condition in a Policy regarding which possibly more misconception has arisen.

When two or more persons have insured the same or portions of the same property with one or more Fire Offices, and a claim arises, it is then that conflicting interests clash, each Insured claiming the amount of loss from his own Insurers. Possibly we may think that in such a case we can point with confidence to the Contribution Clause, which usually reads:—

“If at the time of the loss or damage there be any other insurance effected by the Insured, or by any other person, covering the property affected by the fire, this Company shall not be liable to pay more than its rateable proportion of the loss or damage.”

There is nothing ambiguous about that wording. It does not make any allowance whatever whether the person has the primary, secondary, or only a limited interest, but states in emphatic language that it will only contribute its rateable proportion of the

loss. Now knowledge, like confidence, is often a plant of slow growth, and it is only when we have encountered (I do not say surmounted) obstacle after obstacle that we realise the difficulties with which the enforcement of this Clause is beset. If, however, we bear in mind the fundamental principle of Fire Insurance, that a Fire Policy is a contract of Indemnity, it will assuredly assist us in arriving at a just appreciation of our responsibilities. If, on the other hand, we choose to forget or to ignore that principle, we may, and probably will, eventually find ourselves in a very unenviable position.

Where a person insures the same property with more than one Company, it follows that he can only recover from each Company its rateable proportion of the loss, and no more. In the absence of the Contribution Clause the Insured could claim the amount of loss from any one of his Companies up to the amount of their Policies. In that event the Company paying the loss would be entitled to call upon the co-insurers for their contribution, and could, if the co-insurers failed to fulfil their obligations, institute proceedings against them to enforce payment.

Where, however, a Landlord or Tenant, Lessor and Lessee, Mortgagor and Mortgagee, effect different policies with one or several Companies, the Contribution Clause does not come into operation, unless it can be shown that one of the persons insured for the good of the others.

For instance, a Lessee takes out a lease upon a building, it may be only for the term of one year, but there is a Clause in the lease binding him to maintain and keep the premises in good repair, and so deliver them up at the end or sooner determination of the tenancy. Such a Clause in a lease or letting agreement, simple as it may seem, has the effect of binding the Lessee or Tenant to restore the premises in case they are injured by fire during his tenancy. We will suppose, however, that the Lessee has taken the precaution to insure the premises in his own name with "A" Company, while the Lessor has also insured the premises in his own name with "B" Company. A fire occurs, and the Lessor comes forward and demands payment of the loss from "B" Company, whilst the Lessee says to "A" Company, "I am compelled by my lease to keep the premises in repair, consequently I, and not the Lessor, am entitled to be paid." In this case the Lessee (in Ireland) is primarily liable in respect of the loss and damage to the property covered by the Policy, and is consequently the person entitled to be paid by the Company with

which he is insured. It follows therefore (in Ireland) in this instance that the Contribution Clause would not apply, and each Office would be liable to its own Insured. If the Lessee restores the premises, the Company insuring the Lessor will be discharged from liability. In the event, however, of the Lessee failing to make good the damage, the Lessor's Company would then be bound to pay its Insured, but after payment would be subrogated to the rights of the Lessor, and entitled to recover from the Lessee the amount of loss.

The Metropolitan Building Act (S. 83 of 14 Geo. III., C. 78) provides that under certain stipulations Insurance Offices be authorised and required, upon the request of any person interested in or entitled unto any house or buildings, which may be burnt down, demolished, or damaged by fire, to cause the insurance money to be laid out and expended so far as same will go towards rebuilding, reinstating, or repairing the damaged building.

*In re Goreley ex parte Barker*, this Section was held to apply to the whole of England, and this decision was followed by Mr. Justice Parker in the recent case of *Sinnott v. Bowden*, wherein it was held that a Mortgagee can require the policy moneys to be laid out in rebuilding the premises. This Act, however, does not apply to Ireland.

Again, suppose the owner of valuable oil paintings deposits them with a furniture warehouseman for safe custody, the warehouseman undertaking to keep them insured against loss by fire. Both the owner and the warehouseman effect independent insurances upon the pictures, which are subsequently injured by fire. Which Company is now liable for the loss? Clearly the one which insured the warehouseman, for he is primarily responsible. The insurance effected by the owner is merely a security against the non-performance of the contract entered into by the warehouseman. Here again the Contribution Clause does not apply. So long as the warehouseman performs his part of the contract the owner sustains no loss, but if the warehouseman fails to meet his obligations, then the Company insuring the owner must discharge its liability under the policy. Should the warehouseman subsequently pay the owner, then the Company insuring the owner can proceed to recover back the money paid him, or so much of it as the warehouseman has refunded. Of course, if the warehouseman had not contracted to insure or to be responsible for the goods, even though he did insure them, in the absence of a trade custom, his Policy should not contribute to any loss, as there was

no liability on his part. It sometimes happens that a first Lessee, second Lessee, first Mortgagee, and second Mortgagee effect independent insurances for their respective interests. In the event of a claim arising each Insured would be entitled to recover under his Policy the amount of loss up to the extent of his interests at the time of fire, but no more. Here again the Contribution Clause would not come into operation.

Generally speaking, where one Insured is primarily liable, the Office insuring him is compelled to indemnify him up to the fullest extent. When the Office of the Insured which is not primarily liable has been forced by threat of legal proceedings, or by operation of the law, to pay a loss, it will be subrogated to all the rights of its Insured, and can enforce such rights in a Court of Justice in a manner which need not be discussed here.

As a matter of fact the Contribution Clause in a Policy only applies in cases where a person insures property by different Policies, and where that person is entitled to the benefit of all the Policies. Then the Contribution Clause operates to prevent one Insured from recovering from any Company more than its rateable proportion of the loss.

Some of you will no doubt call to memory instance after instance where different Companies insured different interests, and where each Company only contributed to the loss in proportion to its respective liability under its own Policies. Such instances may, and will no doubt occur again, but such an arrangement was not due to any rights the Companies may have had under the Conditions of their Policies, but may have been due to the tact or skill of the Companies' officials, in accomplishing the apparently impossible, by reconciling conflicting interests, and in getting all the persons interested to agree to the Companies' cheques being drawn in the name of one, or in the joint names of all the persons interested, and in arranging that the Companies obtain a good discharge. Sometimes, however, the impossible cannot be accomplished, and in that event every herring must hang by its own tail.

Of course we are all aware that there is an agreement between the Tariff Offices to the effect that where they have separate insurances upon certain risks they will contribute to any loss up to the extent of their liability. This arrangement is all very well, and is no doubt equitable and expedient as between the Tariff Offices, but such an arrangement is not binding upon the Insured, and is, so far as he is concerned, if he choose to treat it so, not worth the paper upon which it is written.



But, some may say, why not restore and so avoid all these possible complications? Well, you may restore a building, but you cannot restore a dead horse, or even a painting by an Old Master, once it has been destroyed by fire.

It has happened in local circles that where the same premises were insured by a Tariff and non-Tariff Company for different interests, the Company which insured the secondary interest said to the one which protected the primary: You discharge your liability to your Insured, we will not join in the settlement, as no liability attaches to us until you fail to meet yours. In that case the Company which insured the primary interest had to bear the entire loss, and the other escaped simply because the one insuring the primary interest had first to meet its obligation, which was in accordance with the law on the subject. The Contribution Clause, you see, did not take effect in that instance, nor was there any agreement between the Tariff and non-Tariff Offices as to joint contribution.

We are all aware that the Contribution Clause says that the Company shall not pay more than its "rateable" proportion of the loss or damage. A point therefore arises as to the meaning of the word "rateable." Does it refer to the amount of the insurance involved, or does it mean the liability under such insurance? To elucidate this point, let us take the following example. First, on the principle that "rateable" means the amount of insurance:—

INSURANCE.					
A.			B.		Loss.
£1,000			£500		£500
CORRECT APPORTIONMENT.					
£1,000				Pays	
A	x	£500	=	£333 6 8	
£1,500					
£500					
B	x	500	=	166 13 4	£500 0 0
£1,500					

Second, on the principle that "rateable" refers to the liability of each Policy:—

INSURANCE.			
A.		B.	Loss.
£1,000		£500	£500
INCORRECT APPORTIONMENT.			
	Liability.		
A	£500	pays	£250
B	500	„	250
	£1,000		£500

Now, if there were no other insurance but "A" it would pay £500, and if there were no Policy but "B" it would also pay £500. Therefore, if the word "rateable" means the extent of the liabilities and not the amount of the insurance, the liability of each Policy is equal. Such a division of this loss as shown by the second apportionment is inequitable, yet that is the result of dividing the loss over the liabilities.

Notwithstanding this disparity, the general practice is to apportion the loss upon the insurances where the Policies are non-average and concurrent, but upon the liabilities where the Policies are average and non-concurrent.

Let us now proceed to study some of the rules for apportioning losses arising under—

1. Non-concurrent Specific Policies.
2. Concurrent Average Policies.
3. Non-concurrent Average Policies.

#### 1. NON CONCURRENT SPECIFIC POLICIES.

Policies are non-concurrent where one set insures property in one zone, whilst another set insures the same property in the same and other zones.

A form of non-concurrency that sometimes occurs is where a Policy covers one building, whilst another Policy covers the same building and other premises. Where this occurs, the Policies not being subject to average, the loss is usually apportioned on the "Mean Rule" principle. Now this "Mean Rule" method consists in apportioning the largest loss first, then carrying down the balance of insurance and apportioning the smallest loss first. In the following apportionment a loss upon two ranges of property is shown:—

INSURANCES.		LOSS.	
	X	Z	
Bldg. of A. B. and C.	£900	£500	£100
„ D. and E.	200		160
	<u>£1,600</u>		<u>£260</u>

LARGER LOSS FIRST APPORTIONMENT.

Bldg. of D. and E.				X	Z	Totals
	X	Ins.	£200	Note:		ignored
	Z	„	500	Shillings	and Pence	
			<u>£700</u>			
	X	£200				
		<u>£700</u>	x £160 =	£46		
	Z	£500				
		<u>£700</u>	x 160 =		£114	
						£160
Bldg. of A. B. and C.						
	X	Ins.	£900			
	Z	Ins.	£500			
Less loss on Bldg.						
of D. and E.			114 386			
			<u>£1,286</u>			
	X	£900				
		<u>£1,286</u>	x £100 =	£70		
	Z	£386				
		<u>£1,286</u>	x 100 =		£30	
						100
Total				£116	£144	£260

## SMALLER LOSS FIRST APPORTIONMENT.

Bldg. A. B. and C.						X Note: Shillings	Z andPence	Totals ignored
X	Ins.	£900						
Z	„	500						
		<u>£1,400</u>						
		£900						
X		<u>£1,400</u>	x	£100	=	£64		
		£500						
Z		<u>£1,400</u>	x	£100	=		£36	
								£100
Bldg. D. and E.								
X	Ins.			£200				
Z	„	£500						
Less Loss on Bldg.		} 36						
A. B. and C.			464					
				<u>£664</u>				
		£200						
X		<u>£664</u>	x	£160	=	£48		
		£464						
Z		<u>£664</u>	x	160	=		£112	
								£160
Smaller Loss First						Totals	£112	£148
Larger Loss First						Totals	116	144
Grand Totals						.	£228	£292
Mean						.	£114	£146
								£260

You will observe from the figures that

X covers buildings A, B, and C on Plan in	£900
X covers buildings D and E on Plan in ...	200
Z covers buildings A, B, C, D, and E, in ...	500
Total Insurance	...£1,600

The loss upon A, B, and C is ...	... £100
and the loss upon D and E is ...	... 160
	<u>£260</u>

The loss upon D and E, being the larger one, is therefore apportioned first—

X on £200 pays	... £46
Z on £500 pays	... 114
	<u>£160</u>

The balance of the insurance is now carried down and applied to the next larger loss of £100 on A, B, and C.

X has on this item an insurance of ...	... £900
Z has ...	... £500
but Z paid on D and E ...	114

which must be deducted,	
leaving as balance of Z's insurance...	... £386
The entire insurance is now	... £1,286

The loss is now apportioned *pro rata*—

X paying	... £70
and Z „	... 30
	<u>£100</u>

The larger loss having been apportioned, there still remains the Smaller Loss to be considered, as shown on page 96.

X's Insurance is	£900	on A, B, and C.
and Z's „ is	500	on do.
Total Insurance	£1,400	on do.



X on £900 pays	...	£64
Z on £500 „	...	36

---

Making together      £100    which is the total loss on  
A, B, and C.

We now proceed to apportion the loss on D and E.

X has an insurance on D and E of	...	...£200
Z has an insurance on D and E of	£500	
but Z paid on A, B, and C	...	... 36
which must therefore be deducted,		.
leaving as balance of "Z's" insurance	...	... 464

---

The net insurance available is therefore    ...    ...£664  
and the loss is apportioned *pro rata*.

X on £200 pays	...	£48
Z on £464 pays	...	112

---

Making a total loss of ...£160

The two sums are now collected and the result divided by two, which gives the mean loss as shown in the apportionment on page 96.

In the last example we had a loss on two ranges of property covered by two Offices, but we shall now proceed to consider an apportionment of a loss on three ranges of property covered by four Offices, as set out in the following apportionment:—

	A	B	C	D	Loss.	
Building of Dwelling-House	£1,000	} £1,500 }			£2,000	
„ „ Shop ... ..						1,000
„ „ Store ... ..			£,3000	£2,000		500
		£7,500			£3,500	

### BUILDING OF DWELLING-HOUSE.

BUILDING OF DWELLING-HOUSE.					A	B	C	D	Totals
					(Note: Shillings and Pence are ignored.)				
A	£1000	x	£2000	pays	£267				
	7500								
B	£1500	x	2000	„		£400			
	7500								
C	£3000	x	2000	„			£800		
	7500								
D	£2000	x	2000	„				£533	
	7500								
Loss on Dwelling-House				Totals	£267	£400	£800	£533	£2000
BUILDING OF SHOP.									
A does not cover Shop, therefore no liability.									
B			£1500						
less loss on bldg. dwg. house				400	£1100				
C			£3000						
less loss on bldg. dwg. house				800	2200				
D			£2000						
less loss on bldg. dwg. house				533	1467				
Balance Insurance on Shop					£4767				
B	£1100	x	£1000	pays		£231			
	4767								
C	£2200	x	1600	„			£462		
	4767								
D	£1467	x	1000	„				£307	
	4767								
Loss on Shop				Totals	Nil	£231	£462	£307	£1000
BUILDING OF STORE.									
A and B do not cover Store.									
C			£3000						
less loss on dwg. house				£800					
„	shop		462	1262	£1738				
D			£2000						
less loss on dwg. house				£533					
„	shop		307	840	1160				
Balance Insurance on Store					£2898				
C	£1738	x	£500	pays			£300		
	2898								
D	£1160	x	500	„				£200	
	2898								
Loss on Store				Totals	Nil	Nil	£300	£200	£500
Greatest Loss First				Totals	£267	£631	£1562	£1040	£3500

# Least Loss First Apportionment.

STORE.					A	B	C	D	Totals
A and B do not cover Store.					(Note :	Shillings	and Pence	are ignored.)	
C	.	.	.	£3000					
D	.	.	.	2000					
				<u>£3000</u>					
C		x	£500	pays			£300		
			5000						
			£2000						
D		x	500	„				£200	
			5000						
Loss on Store Totals					Nil	Nil	£300	£200	£500
SHOP.									
A does not cover Shop.									
B	.	.	.	Ins. £1500					
C	.	.	.	£3000					
less loss on Store	.	.	300	2700					
D	.	.	.	£2000					
less loss on Store	.	.	200	1800					
Balance Insurance on Shop									
				<u>£6000</u>					
			£1500						
B		x	£1000	pays		£250			
			6000						
			£2700						
C		x	1000	„			£450		
			6000						
			£1800						
D		x	1000	„				£300	
			6000						
Loss on Shop Totals					Nil	£250	£450	£300	£1000
DWELLING-HOUSE.									
A does not cover Dwg. House.									
B	.	.	.	Ins. £1000					
C	.	.	.	£1500					
less loss on Shop	.	.	250	1250					
D	.	.	.	£3000					
less loss on Store	.	.	£300						
„			Shop 450	750 2250					
D	.	.	.	£2000					
less loss on Store	.	.	£200						
„			Shop 300	500 1500					
Balance Insurance on Dwg. House									
				<u>£6000</u>					
			£1000						
A		x	£2000	pays	£333				
			6000						
			£1250						
B		x	2000	„		£417			
			6000						
			£2250						
C		x	2000	„			£750		
			6000						
			£1500						
D		x	2000	„				£500	
			6000						
Loss on Dwelling-House Totals					£333	£417	£750	£500	£2000
Least Loss First Totals					£333	£667	£1500	£1000	£3500
Greatest Loss First Totals					267	631	1562	1040	3500
Grand Totals					£600	£1298	£3062	£2040	£7000
Mean					£300	£649	£1531	£1020	£3500

You will observe from the figures that the greatest loss is that of £2,000 on the Dwelling-house, which must therefore be apportioned first. Now, all the Companies cover the dwelling-house, so that the loss on this item is apportioned *pro rata* :—

A on £1,000 paying	...	...	£267
B on £1,500 paying	...	...	400
C on £3,000 paying	...	...	800
D on £2,000 paying	...	...	533
<hr/>			
Total insurance, £7,500		Total loss, £2,000	

The balance of the insurance is now carried down and applied to the next greatest loss of £1,000 on shop.

Observe that “A” does not cover shop, therefore no liability.

B does cover shop in ... .. £1,500

from which must be deducted loss paid by

“B” on dwelling-house ... .. 400

leaving a balance of ... .. £1,100

C also covers shop in ... .. £3,000

from which is deducted “C’s” loss on

dwelling-house of ... .. 800

“C’s” balance of insurance is ... .. 2,200

D also insures shop in ... .. £2,000

less loss paid on dwelling-house ... .. 533

“D’s” balance of insurance is ... .. 1,467

Leaving an insurance on shop of ... .. £4,767

The loss is now apportioned *pro rata* :—

B on £1,100 paying £231

C on £2,200 paying 462

D on £1,467 paying 307

---

Total loss on shop, £1,000

The least greatest loss of £500 on store must now be considered :—

A and B, as you see, do not cover store, and there is therefore no liability on part of either Company.

But "C" covers store in ... ..	£3,000
from which is deducted—	
Loss paid on dwelling house...	£800
Loss paid on shop ... ..	462
	<hr/> 1,262
leaving as balance of C's insurance ...	£1,738

D insures store in ... ..	£2,000
from which is deducted—	
Loss on dwelling-house ... ..	£533
Loss on shop ... ..	307
	<hr/> 840
leaving as balance of D's insurance ...	1,160

The available insurance on store is now ... ..	£2,898
C on £1,738 paying a loss of £300 and	
D on £1,160 paying a loss of £200	
	<hr/>
Total insurance, £2,898	Total loss, £500

The greatest loss having been disposed of, we now turn our attention to the least loss. For this purpose we commence with a clean slate, as shown on page 100. In the greatest loss first apportionment we took the losses in the following order:—

Dwelling-house, Shop, and Store;

but in the least loss first apportionment we reverse the order, and take the store first, which is the least loss.

You will remember that A and B do not cover store, and that there is no liability on either part.

C covers store in ... ..	£3,000
D covers store in ... ..	2,000
	<hr/>
Total insurance on store ... ..	£5,000

The loss is now apportioned *pro rata* :—

C on £3,000 paying £300	
D on £2,000 paying 200	
	<hr/>
	£500



The next range of loss is that of £1,000 on Shop.

A does not insure shop.		
B insures shop in ...	... £1,500	
C insures shop in ...	£3,000	
Less loss paid on store	300	
	<hr/>	
Balance C's insurance ...	2,700	
D insures shop in ...	£2,000	
Less loss paid on store	200	
	<hr/>	
Balance D's insurance ...	1,800	

The total insurance on shop is now £6,000

and this loss is also apportioned *pro rata* :—

B on ...	£1,500	... paying	£250
C on ...	£2,700	... paying	450
D on ...	£1,800	... paying	300
			<hr/>
			£1,000

The next item is the loss of £2,000 on dwelling-house :—

A insures dwelling-house in ...	... £1,000	
B insures dwelling-house in ...	£1,500	
Less loss on shop ...	250	
	<hr/>	
Balance B's insurance ...	1,250	
C insures dwelling-house in ...	£3,000	
Less loss on store ...	£300	
Less loss on shop ...	450	
	<hr/>	
	750	
Balance C's insurance ...	2,250	
D insures dwelling-house in ...	£2,000	
Less loss on store ...	£200	
Less loss on shop ...	300	
	<hr/>	
	500	
Balance D's insurance ...	1,500	

The available insurance on dwelling-house is now £6,000

and the loss is apportioned *pro rata* :—

A on £1,000 ...	paying ...	£333
B on 1,250 ...	paying ...	417
C on 2,250 ...	paying ...	750
D on 1,500 ...	paying ...	500
		<hr/>
<u>£6,000</u>		<u>£2,000</u>

The totals are now collected, added together, and the result divided by two, which gives the Mean Loss as shewn by the figures in the apportionment on page 100.

## 2. CONCURRENT AVERAGE POLICIES.

An apportionment of a loss under Concurrent Average Policies presents no difficulties. The liabilities are found by taking the ratio which the values at risk bear to the sum insured multiplied by the amount of loss, as shewn by the following example:—

### Policy Subject to 1st Condition of Average.

Insurances. £6,000		Values. £7,000		Loss. £3,000
APPORTIONMENT.				
£6,000				
<hr/>				
£7,000	x	£3,000	=	Coy. Pays    £2,571   8   7
£1,000				
<hr/>				
£7,000	x	3,000	=	Insured Loses    428   11   5
				<hr/>
				Total Loss    £3,000   0   0
				<hr/>

Here the Insured loses £428 11s. 5d., because his values exceeded the insurances by £1,000. Where the values at risk do not exceed the amount of insurance, an Average Policy in reality becomes specific, and the insured is fully paid. If the loss, however, in the case just stated, had been £7,000 instead of £3,000, then the Company would have had to pay the total amount of insurance, viz., £6,000, and the Office could not have got any relief from the operation of Average, because the loss being a total one there was not any salvage to which Average could apply.

## 3. NON-CONCURRENT AVERAGE POLICIES.

Let us now pass to apportionments under Non-concurrent Average Policies—1st Condition of Average. In these cases the method known as “Independent Liability” is usually adopted.

In apportioning losses over Non-concurrent Average Policies a Company’s liability is ascertained by dividing the insurances into the value at risk and multiplying the result by the amount of loss. Now, if in the working out of the figures the result arrived

at shows liabilities to be greater than the loss, then the loss must be taken as the sum of the liabilities. To illustrate this point further, kindly refer to the following apportionment :—

### Policies Subject to 1st Condition of Average.

Company.	No. on Plan.	Insurances.	Values.	Loss.
X covers	1 and 2	£1,000	£1,000	Nil on No. 1.
Z „	2	1,200	500	£300
		<u>£2,200</u>	<u>£1,500</u>	<u>£300</u>

#### INCORRECT APPORTIONMENT.—No. 1.

				Independent Liability.	Pays.
X	£1,000	x	£300	=	£200
	£1,500				£65
Z	£1,200	x	300	=	720
	£500				235
				<u>£920</u>	<u>£300</u>

#### CORRECT APPORTIONMENT.—No. 2.

				Independent Liability.	Pays.
X	£1,000	x	£300	=	£200
	£1,500				£120
Z	£1,200	x	300	=	300
	£500				180
				<u>£500</u>	<u>£300</u>

Apportionment No. 1 is incorrect inasmuch as the liability of “Z” exceeds the amount of loss, in consequence of which “Z” is asked to pay £235, when in reality that Company’s proportion of the loss is only £180, as shown in the correct apportionment No. 2.

It sometimes happens that when the first Condition of Average is attached to a Policy, a person, though underinsured, can, paradoxical as it may seem, recover the full amount of loss, as shown in the next apportionment.

**Policies Subject to 1st Condition of Average.**

	Insurances.		Values.	Loss.
Fixtures and Fittings	} £1,000	A        B	£1,000	Nil.
Stock-in-Trade			500	£500
Utensils			1,000	Nil.
			<hr/>	<hr/>
			£2,000	£2,500
			<hr/>	<hr/>
			£2,500	£500
			<hr/>	<hr/>

**APPORTIONMENT.**

Coys.			Loss.	Independent Liability.		Loss.
	Insurances £1,000					
A	<hr/>	x	£500	=	£333	pays £250
	Values £1,500					
	Insurances £1,000					
B	<hr/>	x	500	=	333	„ 250
	Values 1,500					
					<hr/>	<hr/>
					£666	£500
					<hr/>	<hr/>

You will observe from this, that the values at risk are £2,500, and the insurances £2,000, yet the Average Clause does not operate against the Insured, because the combined liabilities are £666, against a loss of £500.

The operation of the Average Clause, however, is not always so favourable to the Insured as in the last instance, for we shall now proceed to consider a case where the Insured is fully covered and yet, owing to the operation of the Average, he sustains a loss of £276 18s. 6d., as shown in the following example:—

**Policies Subject to 1st Condition of Average.**

No. on Plan	Insurances.			Values.	Loss.
	X	Y	Z		
1	£500			£600	Nil.
2		£400		250	Nil.
3			£500	450	£450
	<hr/>			<hr/>	<hr/>
	£1,400			£1,300	£450
	<hr/>			<hr/>	<hr/>

APPORTIONMENT.					Liability.
					Pays.
No. 1 on Plan	X.	£500	x Nil		Nil
		<u>£600</u>			
No. 2 on Plan	Y.	£400	x Nil		Nil
		<u>£850</u>			
No. 1, 2, & 3 on Plan	Z.	£500	x £450		£173 1 6
		<u>£1,300</u>			
			Insured loses ...	276 18 6	
				<u>£450 0 0</u>	

Although the values in this instance do not exceed the total sum of the insurance, yet, as you see, the Insured loses £276 18s. 6d. because his insurances are not properly divided. Whilst it may be an established axiom with the Fire Offices that where an Insured is fully covered he should not sustain any loss—yet the question of *ex gratia* payments is outside the scope of this paper, so that we need not dwell on that phase of the subject.

Before passing from the subject of Contribution under Non-concurrent Average Policies, we will select for consideration a question set in the examination papers of the Federated Institute last year.

*Question.*—What method of apportionment would you adopt in the following circumstances?

Company X insures Warehouse A for £10,000, subject to the *pro rata* condition of average.

Company Z insures Warehouses A and B for £15,000, also subject to the *pro rata* condition of average.

The values are: Warehouse A, £12,500; and Warehouse B, £12,500.

Losses: Warehouse A, £10,000; Warehouse B, £2,500.

*Answer.*—The Policies being Non-concurrent, and each being subject to the *pro rata* condition of average, the loss should be apportioned on the “Independent Liability” principle, as shown by the following apportionment:—

### Policies Subject to 1st Condition of Average.

	Office.	Insurance.		Values.	Loss.
Warehouse A	X	£10,000	A	£12,500	£10,000
A B	Z	15,000	B	12,500	2,500
		<u>£25,000</u>		<u>£25,000</u>	<u>£12,500</u>



## APPORTIONMENT.

Office.	Values.	Insurance.	Loss.	Independent Liability.	Loss A & B
X	£12,500	: £10,000	:: £10,000	= £8,000	pays £6,451 12 3
Z	25,000	15,000	12,500	= 7,500	„ 6,048 7 9
				<u>£15,500</u>	<u>£12,500 0 0</u>

We will now take a brief glance at the operation of the Second Condition of Average, which reads:—

“But if any of the property included in such average shall, at the breaking out of any fire, be also covered by any other more specific insurance, *i.e.*, by an insurance which at the time of such fire applies to part only of the property actually at risk and protected by this insurance, and to no other property whatsoever, then this Policy shall not insure the same except only as regards any excess of value beyond the amount of such more specific insurance or insurances, which said excess is declared to be under the protection of this Policy and subject to average as aforesaid.”

Unlike the First Condition of Average, it rarely happens that the Second Condition operates to the disadvantage of the insured; not only that, but it even sometimes comes to his relief, as shewn by the following examples:—

WITH FIRST CONDITION OF AVERAGE ONLY.

NO. ON PLAN.	INSURANCE.	VALUES.	LOSS.
1 to 5 Specification	£4,000	£10,000	£8,000
6 to 10 do.	2,000	4,000	nil
11 to 18 do.	4,000	6,000	nil
1 to 18 Floater	10,000		
	<u>£20,000</u>	<u>£20,000</u>	<u>£8,000</u>

APPORTIONMENT.

	£4,000			Pays
Specification Policies	<u>£10,000</u>	x	£8,000	= £3,200
	£10,000			
	£10,000			
Floater	<u>£20,000</u>	x	8,000	= 4,000
				<u>£7,200</u>
			Insured loses	800
			Total Loss	<u>£8,000</u>

WITH FIRST AND SECOND CONDITIONS OF AVERAGE.

Same amount of Insurance, Values, and Loss, as shown in preceding apportionment.

APPORTIONMENT.

	£4,000			
Specification Policies	<u>£10,000</u>	x	£8,000	pays £3,200
	£10,000			
Values covered by Floater } 1 to 18	£20,000			
Less Specification Insurances	10,000			
	<u>£10,000</u>			
Net Values	<u>£10,000</u>	x	4,800	pays 4,800
	£10,000			
			Total Loss.	Insured is fully paid <u>£8,000</u>

In the first example, where all the Policies are subject to the First Condition of Average only, you will observe that the Insured loses £800, although the total values do not exceed the total insurances. The loss to the Insured, in this instance, arises from his insurances being improperly divided.

But in the second example, where the Policies are subject to both the First and Second Conditions of Average, although the insurance and values remain as before, the Insured does not

sustain any loss whatever, and for this reason : the Second Condition says that it does not insure property which is protected by any more specific insurance, except only as regards any excess of value beyond the amount of such more specific insurance. The excess values, in the case under consideration, which the specific insurances are inadequate to protect, amount to £10,000, therefore the Floater takes this excess under its protection and pays the balance of loss, amounting to £4,800.

The Federated Institute, in their examination papers last year, set a question on this subject as follows :—

All Policies subject to both Conditions of Average.

#### INSURANCES.

##### ON PLAN.

Offices	A.B.C.D.	A.E.	A.B.C.E.	E.	VALUES.	Loss.
O	£2,000			.	A £1,500 B nil	£1,200 nil.
X		£2,000			C nil	nil.
Z			£3,000		D nil	nil.
M				£1,000	E £800	nil.
					£2,300	£1,200

*Answer.*—As there is nothing at risk in B, C, and D, therefore “O” covers A only.

“X” covers both A and E.

“Z” also covers the values at risk in A and E.

“M” covers the values in “E” only, upon which there is not any loss.

Therefore “O” being the smallest range Policy (in other words, the more specific insurance), bears the entire loss, and the other Policies escape.

The First Condition of Average does not come into operation at all, as the property is fully insured.

Now, some may say this reads all very well, but as you are not a Lawyer, only an Assessor, what are the grounds for these statements and deductions in regard to the Law on the subject? What are your authorities? That I admit at once is a most reasonable request and a fair criticism.

Well, I reply that the principle of Contribution is ruled by the celebrated case known as the “King and Queen Granaries,”

Rotherhithe, which was an action at Law instituted for the purpose of ascertaining the liabilities of certain Companies in respect of damage by fire.

There were two sets of Policies involved. One set was taken out by the wharfingers covering goods in trust or on commission for which they were responsible. Another set of Policies was taken out by the merchants covering their goods stored in the wharfingers' granaries. All the Policies contained the Contribution Clause. The loss, which was a serious one, amounted to £127,459. The Companies insuring the wharfingers not only contended that as the merchants' Policies contained the Contribution Clause, such Policies must therefore contribute to the loss, but they even went a step further, and contended that no liability attached to the wharfingers' Policies, as the merchants' Policies fully insured all the grain.

The Master of the Rolls, before whom the case was tried, in the first instance, gave judgment in favour of the Companies insuring the merchants' grain. The case subsequently went to the Court of Appeal, and Lord Justice James, in delivering judgment, said: "I am of opinion that the Order of the Master of the Rolls ought to be affirmed.

"The case is this—the wharfingers, being liable to make good any loss by fire of the merchants, insured the goods in one Office, and the merchants for their own protection insured the goods in another Office. There was no communication between the two Offices, or between the two persons insuring.

"Under the circumstances it seems to me utterly impossible to say that there could have been any Contribution. Contribution exists where the thing is done by the same person against the same loss, and to prevent a man first of all recovering more than the whole loss, or if he recovers the whole loss from one which he could have recovered from the others, then to make the parties contribute rateably, but that only applies where there is the same person insuring the same interest with more than one Office."

It is not often, however, that a question of apportionment reaches the Law Courts, so that we have very little to guide us in the way of legal decisions, but there is one legal decision at least bearing upon this point which is worthy of consideration.

An action was brought by the American Surety Company of New York *v.* Harry Wrightson (an Underwriter at Lloyds') to recover a contribution under a Policy of Insurance. The case was

tried in the King's Bench Division, London, before Mr. Justice Hamilton, in the month of November, 1910.

It appears that the American Surety Company guaranteed the National Bank of New York against loss by defalcations on the part of their employees. One of them who was guaranteed up to £500, misappropriated funds to the extent of £536. Prior to the defalcations the Bank had taken out a second Policy at Lloyds' for £40,000, covering not only the fidelity risk, but also that of loss sustained by the loss or destruction of bonds or banknotes. The Bank recovered from the American Surety Company £500, being the full amount of their liability, and from Lloyds' £36, being the balance of loss.

The Surety Company contended that as there was a double insurance they were entitled to a contribution from Lloyds' in the proportion which £40,000 bore to £500. The Underwriters contended that under no circumstances could they be liable for more than £286, being half the £500 paid by the Surety Company and the £36 which they themselves had already paid.

Mr. Justice Hamilton, in delivering judgment, said: "The schedule of the Surety Company's Policy contained the names of about 100 employees, the total liabilities assumed being £119,000.

"There was a great difference in the scope and character of the two Policies, in the hazards covered, and in the persons bringing these hazards into operation. It had been suggested that American Law was applicable, but in his view the duty of Contribution did not depend upon contract, but upon principles of Equity, and the party required to do Equity must be subject to the Court dealing with the matter. He could not distribute the £40,000 amongst the various risks, and he could not assume a willingness by the defendants to write a line on the employee guilty of misappropriation as if he alone were insured against.

"The principle put forward by the Surety Company must fail, and he accepted that which said that the Underwriters were liable upon the basis that they (the Underwriters) should bear a proportion of the whole loss of £536 in the ratio of £536 to £500."

Although this case was a guarantee one, yet the analogy between it and a fire loss is very great. This decision is an important one to the Fire Offices, inasmuch as Mr. Justice Hamilton based his decision not on the amount of the insurance at risk, but upon the respective liabilities of each Policy, as shewn by the following apportionment:—



No. 1.

APPORTIONMENT OVER LIABILITIES.

	Insurance.	Liability.	Loss.
Surety Co.	Specific £500	£500	£536
		$\frac{£500}{£1036} \times £536$	pays £258 13 8
Lloyds'	Floater £40,000	£536	£536
	$\frac{£40,000}{£40,500}$	$\frac{£536}{£1,036}$	$\frac{£536}{£536}$
			pays 277 6 4
			£536 0 0

If Mr. Justice Hamilton had found in favour of the Surety Company, and based his judgment not upon the liabilities of each Policy, but upon the actual insurances, the result would have been as shewn by following apportionment:—

No. 2.

APPORTIONMENT OVER INSURANCES.

	Insurance.	Loss.
Surety Co.	Specific £500	£536
	$\frac{£500}{£40,500} \times £536$	pays £6 12 4
Lloyds'	Floater £40,000	£536
	$\frac{£40,000}{£40,500}$	$\frac{£536}{£536}$
		pays 529 7 8
		£536 0 0

There is little or nothing new in all that I have said, and there is still a great deal left unsaid.

I have given, however, a brief *resumé* of my own experience on this particular subject, gained in assessing losses over a longer period than I care to remember. I desire to acknowledge that I am debtor to *Pipkin*, to *Atkins*, to *Hore*, and to *Laird*. But I am also debtor, and which of us is not, to our old, tried, trusted, and never-failing friend, *Bunyon*.



# THE UNDERWRITING OF EMPLOYERS' LIABILITY RISKS.

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By E. E. B. ELDRIDGE, F.S.S., A.I.A.

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*A Paper read before the Insurance Institute of Brighton,  
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IN considering the underwriting of Employers' Liability risks, we are dealing with a subject which has probably given rise to some of the greatest changes which have ever taken place in the Insurance world, with a department which, during the last decade, has undoubtedly been a source of continual anxiety to those connected with it, and with a class of business in connection with which the annual premium income has, during the last 15 years, risen from almost a negligible quantity to nearly £3,000,000.

Before considering the various questions which have to be dealt with in the underwriting of Employers' Liability business, it is necessary to trace briefly the history of the transacting of this class of business in the past, in order to properly realise and appreciate the position as it presents itself at the present time. As you are all probably aware, the passing of each of the Workmen's Compensation Acts (1897, 1900, and 1906) resulted in a large number of the then existing Fire and Life Offices entering into the field of Accident business, and also in a number of new Companies being formed. In the case of many of the former, this course was considered necessary in order to conserve existing connections, whilst not a few of both the old and the new Companies anticipated that large profits would accrue from the transacting of this class of Insurance.

It is impossible to estimate the sums which have been lost by Insurance Companies in connection with this class of business since 1897, but for the four years 1908/11 (in respect of which we have a proper record) we find that one Company alone

has lost nearly £150,000 during that period ; another shows a total deficit in respect of two of the years of over £84,000 ; five other Companies show losses for individual years ranging from £20,000 to £30,000, whilst the aggregate experience for the period, after deducting the profits which have been made (for naturally not every Company has made a loss every year), brings out a balance on the wrong side of over £400,000, or over 4 per cent. of the total Employers' Liability premiums earned by the Companies during the four years.

These results are perhaps not surprising when regard is had to the difficulties which have beset the Underwriter in the past. Firstly, there was the almost frenzied manner in which Insurance Companies competed for the business without paying any regard to those factors concerning the same, which we now know to be all important ; and, secondly, there was the difficulty of assessing the liability which had to be covered. So far as the second point is concerned, it is only necessary, in order to appreciate the position, to remember that the statutory liability of an employer has been re-modelled twice during the past 15 years, whilst it is impossible to state how many times various questions as to liability have been revised by decisions of the Courts on points which were considered settled.

A further difficulty affecting the assessment of the liability was that of estimating the liability attaching in respect of outstanding claims. Without accurate information on this point, it was obviously impossible to ascertain the true position of a Company or the actual loss ratio for any particular trade. In the past it has not been unusual for this liability to be underestimated by as much as 50 per cent. or 60 per cent., whilst it is possible to find cases where, for years as recent as 1909, the deviation amounts to 30 per cent. This, as you will realise, is a serious matter, especially when regard is had to the large amount which really requires to be set aside in respect of outstanding claims.

The next point to be considered is the nature of the data at our disposal upon which to base rates, the accuracy of the same, and the means of applying it to future liabilities, as without at least some general idea of the rates required to cover the risk, it is useless applying any refinements to the underwriting. The volume of the data should now be sufficient, but unless it is homogeneous, and in such form as to

be suitable for the purpose for which it should now be available, it is useless. On this point it is impossible to hazard any definite opinion, although there is no doubt that more is now understood than was previously realised, and that proper statistical methods are now being applied by individual Companies to the valuable experiences which they have accumulated.

The principal disturbing factors of an experience which are most commonly met with, and which lead to unreliable results, are: insufficiency of data, variation from the normal of the risks comprising the experience, and inability to realise the liability attaching in respect of outstanding claims.

Although, for the reasons I have mentioned, it is, as yet, impossible to underwrite this class of business with that degree of certainty which is expected and is obtained in connection with other classes, it must not be thought that every Company transacting the business has consistently made a loss, as this is not the case, many having shown a balance on the right side practically every year. In this connection at least eight important Companies have made an underwriting profit in each of the past four years, 13 have been equally successful in at least three of those years, and 19 in two of the years, whilst the figures for 1911 show that—ignoring those cases where the profit was less than £1,000—ten Companies had between them a credit balance of over £64,000, which is equivalent to nearly 9 per cent. of their Employers' Liability premium income.

These results are undoubtedly a credit to the underwriters involved, especially when it is remembered that a cumulative burden was placed upon successive years in all those cases where the original reserves in respect of outstanding claims were not sufficient to meet the liability.

These figures, regarded as a whole, may, I think, be taken as showing that, with care and consideration, the results of the future need not be so bad as they have, speaking generally, been in the past, and although, in view of the many unfavourable features which I have mentioned, the question which arises in connection with the underwriting of Employers' Liability business must be approached very carefully, it is, I think, possible to look forward with a certain amount of hope and anticipation that the efforts of the past need not be entirely vitiated.



Having briefly considered the position as it presents itself at the present day, we can turn our attention to the all-important question of the manner in which the business should be dealt with if the future is to remove the stain which the past has left on the reputation of so many of those who have been responsible for the conduct of the business.

It will at once be apparent that, in underwriting a class of business in connection with which the losses and profits in the past have fluctuated between such wide limits, the greatest care should be exercised, and that accordingly no haphazard methods should be employed. How many of us have not been asked the question—"What is your rate for so-and-so?"—the enquirer naming, perhaps, a class of risk which in individual cases varies greatly, without supplying any details as to the precise nature of the work carried on, the amount of wages paid, or the past claims experience, and very probably with no information as to whether any mechanically-driven machinery is used or not, and, when we have asked for particulars on these points, have been met with the rejoinder, "Oh, quote subject to satisfactory proposal." Now, it is obviously impossible (if we are to comply with what I consider the essentialities for the proper underwriting of Employers' Liability business) to accede to requests of this description. What would a tradesman say if he was asked to quote for the supply of certain articles without being told anything as to the number or the quality required, or when or where they were to be delivered? I think he would do what we ought undoubtedly to do under the circumstances I have mentioned, viz., politely point out the impossibility of giving a quotation, which can give satisfaction to both parties, without being supplied with proper information. It is, of course, possible to give an idea of the minimum rate for the risk provided it comes up to standard, but this course is most undesirable, as the public are apt to take such quotations as being definite, as naturally very few are willing to admit—when full particulars are disclosed—that their risk does not come up to the standard of similarly-described risks, and that it is only fair for a higher rate to be charged.

In order, in my opinion, to underwrite on really sound lines, it is necessary to consider the risk from three points of view. Firstly, from its general description; secondly, by having

regard to the past claims experience; and, thirdly, by the aid of a specially-trained Surveyor's report. After this, the terms of acceptance can be considered, and the risk rated. Information on the first two points mentioned above is, of course, obtained from the proposal. In this connection it is absolutely essential that complete information on all points which are raised should be obtained. Special attention should be given to the description of the Proposer's trade or business, and the nature of the operations which are carried on. Ambiguous terms such as "Contractor" or "Engineer" are quite useless, unless the same are properly defined and the nature of the work to be covered made clear. For example: "Contractor" may mean a building contractor, a carting contractor, or, in fact, a contractor for any class of work; similarly, the term "Engineer" covers practically anything from the making of a lock to the construction of, say, another Tower Bridge or a new Palace Pier.

Terms such as "incidental to trade," in answer to the question as to particulars of any machinery which is used, are not sufficient, neither is a statement to the effect that "only a few minor accidents have happened in the past," an adequate reply to the question as to the past claims experience.

From the proposal, one should be able to weigh up the general nature of the risk, and to realise whether there are any special features, either good or bad, affecting the same. In order to be able to do this, it is necessary to have a thorough knowledge of the various processes connected with the different trades which are met with, and of the mechanical aids which are used and the purposes for which they are employed. It is also necessary to be able to appreciate the extent to which the employees are subject to any of the scheduled industrial diseases, and to know which processes or occupations involve these extra risks. The extent to which similarly-described risks may vary amongst themselves is surprising, and it is accordingly necessary in the first place to divide up several trades and industries in order to get more homogeneous classes, as, for example, in the case of Builders, Decorators, Grain Dealers, Collieries, Quarries, Road and Sewer Contractors, etc. This variation may be due to the nature of the work, or the manner in which it is carried out, or the locality in which the risk is situated.

After considering the general nature of the risk to be covered—according to the trade of the Proposer—and the machinery, etc., which is used, attention must be given to the past claims experience. This, after the general description of the risk, is probably, in many of the larger cases, the most important factor which has to be considered. It is, of course, not advisable to place too much reliance upon the particulars of the past experience which are given on the proposal form, as the same must obviously be subject to both personal and natural errors (*i.e.*, errors resulting from the inability of the Proposer to properly or accurately complete the form and errors resulting from lack of information), although, on the whole, it is believed that the information generally given is fairly accurate. Allowances must, however, be made especially in connection with the estimates which one finds put against outstanding claims. If the risk is a comparatively small one, and one which should, in the ordinary way, show a very low “claims cost,” little can be gained from the fact that the past experience is given as quite clear, beyond the fact that the risk is not abnormal. If, however, accidents have happened in the past with a certain amount of regularity, and are in excess of the number one would expect to find, it is apparent that the risk does not come up to the normal standard, and must accordingly be specially considered. Practically similar remarks can be applied to other small cases, even though the normal “claims cost” be higher, as it is impossible to expect an average experience where the number of men at risk is not great. If, however, the experience is abnormal, and regularly so, the case must be specially considered, and if possible the cause of the unfavourable experience ascertained.

When we come to larger risks, the value of having the experience is very much increased, as it undoubtedly throws a great deal of light on the character of the risk.

Each accident can be classified under one of the three headings—either it is Fatal, or Serious or Permanent, or Slight. If a number of accidents, sufficiently large to form a reliable average, are taken from a normal general experience, and tabulated in the manner I have mentioned, it will be found that the first two classes between them will only account for from about 1.5 per cent. to 2 per cent. of the total number. Although, however, the number of fatal and serious and

permanent accidents is comparatively small, the average cost is, of course, considerably larger—being about 50 times that of the slight accidents.

From this it will be seen that the total cost of the few fatal and serious accidents over a large number is just about the same as the more numerous minor accidents. These proportions vary according to the nature of the risk. For example, it will be found that the cost of the fatal and serious accidents in the case of a window-cleaning risk, a saw-milling risk, or a heavy building risk is greater than the cost of the minor accidents, whilst, in connection with light risks, such as dress-makers, bootmakers, cabinetmakers (excluding machinery risks), etc., the reverse will be found to be the case. These results are, of course, only what one might expect to find.

Reverting now to the experience disclosed in connection with any particular proposal, it will be seen that the first thing to do is to compare the amount of compensation paid in connection with minor accidents with the total premium receivable for the risk calculated at "normal rates."

If the risk is up to the standard, and we are working to a 60 per cent. loss ratio, it should give an average loss ratio for the past three years of not more than from 25 per cent. to 30 per cent., according to the nature of the risk—leaving about 5 per cent. for fluctuations, and from 25 per cent. to 30 per cent. for the fatal and serious accidents, which can next be considered.

These may be conspicuous by their absence. If this is the case, no further consideration need be given to the experience—although the fact that there has not been a fatal or a serious accident over a period of three years does not necessarily mean that the risk is extra good, as it may very reasonably happen that it is due to the experience not being sufficiently large to form an average. Similarly, the presence of an undue number of accidents coming under this category does not necessarily point to the risk being bad, but may be due to the same cause; but careful and complete enquiries must be made, with a view to being satisfied that the occurrence is merely an accident, and not due to any cause which may lead to a repetition of this experience in the future.

If the experience has fluctuated to any great extent from year to year, or the number of accidents happening in con-



secutive years is shown to be increasing, particulars of the actual wages paid during each of the years to which the experience applies must be obtained with a view to seeing whether the amount at risk has been fluctuating or altering in a similar manner.

In those cases where there have been any fatal or serious accidents, or where the number of minor accidents is excessive, special enquiries should be made when the risk is being surveyed—to which I will refer later—with a view to ascertaining the circumstances of the same, and the injuries which have resulted, the precautions which have been taken to prevent recurrences in the future, and whether the same thoroughly meet the requirements of the case.

Before dealing with the requirements of the survey, I propose to deal briefly with the need for surveying risks of this description before rating or acceptance. This question, in my opinion, has not in the past received the attention it deserves, and although there are signs that Underwriters are beginning to be alive to the necessity of having before them detailed particulars (obtained by a trained and experienced expert) of the risk which is to be covered and of giving consideration to any features affecting the same which may be disclosed, much yet remains to be done in this direction.

It is not sufficient to merely survey those risks which usually present special features, such as quarries or clay-pits, or those cases where there is any specially hazardous description of machinery used, such as sawmills, cabinet-makers, etc., or those cases which have had an abnormal experience in the past, which is practically the extent of the present-day practice. If the underwriting is to be consistently successful and is to be conducted on proper lines, there is no doubt but that every risk, excepting possibly only shop risks where no machinery is used, must be surveyed, and it must be considered as possible that this course will in due time be adopted by every Company.

If it is necessary for lives to be medically examined before being accepted for Life insurance in order that the Company may ascertain that there is no cause present, apparent to an expert, which is likely to shorten the Proposer's life, and for Fire risks to be surveyed before a definite quotation is given, it is surely essential that the report of a trained official as to



the possibilities of accident should be obtained, in order that the Underwriter may be in possession of the precise nature of the risk to be insured, and the steps, if any, which are taken to prevent and minimise the seriousness of accident of employment. To survey only certain risks before acceptance is tantamount to suggesting that it is only in connection with those risks that any serious accident is likely to happen or an undue risk to be incurred. This, of course, as we all know, is a fallacy, as many serious accidents happen in connection with quite ordinary risks, *i.e.*, an unguarded sausage-making machine is certainly quite as, if not more, dangerous than the majority of the machinery which will be found in a printing or laundry works. Further, the survey should not be restricted to factories, as it is quite as necessary to know that the ladders, scaffolding, etc., which are used by builders are in good condition and to have some particulars of the usual class of work undertaken.

I need not refer to the absurdity—although it is often done—of only surveying a risk after a serious accident, or a series of minor accidents, has occurred. It is not much consolation to find that the risk is a bad one when it has still some months to run. I do not, of course, wish you to infer from this that the scene of a serious accident should not at once be visited, as much information for use in future cases may be earned from doing so, but “prevention is better than cure,” and the fallacy of the practice I have referred to must not be overlooked.

It is not possible, in the scope of a short paper such as this, to deal fully with the various points which have to be considered when making a survey, nor would it be permissible, having regard to the title of this paper, for me to do so. It is, however, necessary to consider briefly the purposes for which the survey has to be made and the information which the Underwriter requires to have before him.

The objects of the survey are to enable the Underwriter to more accurately gauge the risk than is otherwise possible, and to make suggestions, if necessary, for the improvement of the same with a view to as far as possible preventing accidents, or to, at least, minimise their seriousness. For this purpose, it is necessary that the surveyor's report should supplement the information given by the Proposer on the proposal form with details of the processes carried on, particulars of the

machinery used, the extent to which same is guarded and fenced, the condition of the premises, whether they are thoroughly suitable for the purposes for which they are used, the class of work-people employed, the proportion of males and females and minors, the method of remuneration, and whether they are paid by time or on piece-work, whether there are any aged, infirm, or physically defective, and whether there are any special rewards for good conduct or long service.

From the survey we pass to the question of rating. If the proposal and the surveyor's report are both quite satisfactory, and the risk does not present any features calling for special consideration, the rate to be quoted is the one based on the past experience of similarly constituted normal risks loaded to meet expenses and fluctuations in the rate of accident and cost of claims, and to provide a reasonable profit to the Company in exchange for the security which is provided by the shareholders' capital, which we will call the minimum rate. This, as its name implies, is the lowest rate at which it is possible to accept, with safety, first-class normal risks. It is important to bear this in mind, as so many people are apt to confuse the minimum rate with what we may term "the average rate," with the result that, instead of charging an additional premium in respect of cases which do not come up to the standard for the particular class, allow a reduction when the risk appears satisfactory—with obvious results. In order to make my meaning on this point clear, I would refer you to the analogous question which arises in connection with the underwriting of Life business. If a life is passed as first-class, a reduction is not made from the published rates, which past experience has proved to be required to cover the risk, nor is one expected; but if, on the other hand, the life is not up to the standard for any reason, an extra premium is charged. A precisely similar course must be adopted in the underwriting of Employers' Liability business. I am not suggesting that it is possible or necessary to draw up a scale of graduated additional premiums to meet extra risks, although this course is adopted to some extent in connection with Fire risks, but I do insist that it is absolutely necessary that any increased hazard should be met by an increased premium. It will, of course, happen (and should do in a fair number of cases) that on the surveyor's report the risk is practically uninsurable unless certain altera-

tions are made or additional precautions are taken, whilst, in others, it will be necessary to rate up the risk. In my opinion, it is always more desirable to have, if possible, a risk improved than to rate it up.

The features which have to be considered when rating a risk are fairly clearly indicated in my remarks as to the points upon which information is required from the surveyor. So far, in considering the question of rating, I have dealt only with normal and abnormal risks. There is, however, another class which, although numerically smaller in number than the normal class, is important from the point of magnitude. These I will call the sub-normal risks, viz., those individual risks which, from their past experience, show, in comparison with the experience of the larger number of similar normal risks, a very low claims cost and which are of sufficient magnitude to form over a number of years an experience in themselves, and which are quite up to the standard in every other respect.

In rating these cases consideration must, as far as possible, be given to the individual features of each risk, but care must be taken to see that it complies with the definition of a normal risk which I have given above.

The premiums for Employers' Liability risks are, as you are doubtless aware, either a percentage on the wages paid, or a *per capita* charge on the number of persons employed, according to the nature of the risk. In using the first method care must be taken to see that when either the rate or the remuneration of the employees to be insured is low, an adequate *per capita* premium is obtained. as the low rate of wage does not necessarily mean a limited liability or a reduced possibility of accident, but may be due to the employment of young or cheap labour or some special conditions of service.

Having regard to the fact that the liability of an employer under the Workmen's Compensation Act varies according as to whether the injured person is under or over 21 years of age at the time of the accident, it is essential, if the underwriting is to be at all scientifically carried out, that consideration should be given to this fact. As an illustration of my point, we have only to consider the case of two persons engaged in, say, delivery work. One is 16 and is earning 10s. per week, the other is just over 21 and is receiving 15s. per week. The former is entitled

to 10s. per week compensation with the right of increase on review at any time after six months from the date of the accident, whilst the maximum amount of compensation the latter can obtain is 7s 6d. per week. In other words, the liability in respect of the former, assuming the rate of accident is the same, but omitting altogether the natural tendency for malingering where full wages are being received, is more than  $33\frac{1}{3}$  per cent. greater.

Another point which has to be considered when rating a proposal is the additional premium which should be received in respect of an extra risk only occasionally incurred. In these cases it is not sufficient to merely charge the usual rate applicable to the work upon the wages paid whilst the same is being carried out, but an adequate minimum premium must be insisted upon, for the simple reason that the extra risk cannot be up to our standard requirements, *i.e.*, it will generally be found in the case of a farmer using a circular saw for cutting up wood, that the saw bench is not properly secured or in a particularly good condition, nor the saw adequately guarded, whilst the labourer who is using it cannot be compared with the skilled workman who would be engaged upon the work were it being regularly carried out.

If the risk is only to be accepted contingent upon the Proposer carrying out certain alterations or the fixing of additional guards, etc., advice to that effect has to be given to the Agent or the Proposer, and no liability should be accepted until such alterations, etc., have been made to the satisfaction of the Company's Surveyor. In other cases, it is, of course, merely necessary to advise the rates and any special restrictions which will apply. This latter point should, however, on no account be overlooked, as a Proposer undoubtedly has a real grievance if, after paying his premium, he finds that the indemnity is subject to several restrictive endorsements. Indeed, it is very questionable whether he cannot insist upon an open policy being delivered to him. Care must be taken when referring to endorsements to see that reference is made in plain terms. For example, it is not sufficient to say that 30s. per cent. is the rate for such and such a risk, "excluding machinery," which the Proposer may reasonably interpret as meaning "any machinery," when possibly it only means "machinery driven by mechanical power," or that the policy



will be "subject to the Builders' Clause," which, it must be admitted, really does not convey much to anyone but an Insurance expert.

No consideration of the question of underwriting would be complete without a reference to the terms of the Policy. The Policy does not provide any personal benefit to the Insured, but is merely an Indemnity in respect of certain Statutory and Common Law Liabilities which *ipso facto* attach to the Insured as an employer. For this reason it can and should be complete and fully cover the risk proposed to the Company, and be subject only to such conditions as may reasonably be necessary to protect the Company's interests.

The Policy should apply, without requiring notice to be given to the Company, in respect of any person for whom premium is paid who may be employed. It is not necessary that the premium be paid at the time the alteration is made in the staff, provided the person's name and his earnings are duly entered in the Wages Book, in order to be included in the return to be made to the Company, for the purpose of adjusting the premium at the expiry of the current period of insurance.

The principal conditions of an Employers' Liability Policy are that the workman is employed in the business of the employer mentioned in the policy; that notice of the happening of any accident, or the commencement of disablement due to a disease, be given to the Company immediately it comes to the knowledge of the Insured or the Insured's representative for the time being; that no alteration be made in the condition of the premises or the guarding of any machinery after an accident in connection therewith has happened, until the Company has had an opportunity of examining the same; and that a Wages Book be kept in order that, in addition to supplying a basis for adjusting the premium, a record may exist of those persons who are entitled to call upon the employer for compensation, and that there may be evidence as to the earnings which they have been receiving. These conditions are quite reasonable, and their objects quite obvious.

In describing in a policy a person's occupation, care should be taken to use as far as possible (expressed grammatically) the participle instead of the noun. For example, a farmer should be described as carrying on the business of "farming,"



and not the business of "a farmer." The former restricts the risk to work incidental farming, whilst the use of the latter term might attach a liability to the Company in respect of carting work—off the farm—or quarrying—on the ground that such work was part of the usual work of a farmer. Many similar examples, such as builders and building, brickmakers and brickmaking, etc., can be cited.

With regard to endorsements, the object and necessity is usually to standardise as far as possible risks of a similar character, and to prevent any special hazards entering into the same and destroying the homogeneity of the class, which would, of course, entirely destroy the value of the experience. The absence of any restriction would, in very many cases, allow of too wide a fluctuation in the actual nature of the risk to be permissible. In drafting endorsements, care should be taken to guard against what is rather a common error, viz., that of excluding work, when the intention is to exclude all risks incidental to or connected with certain work. One cannot, of course, exclude work.

I have now touched upon the principal points which I think require consideration when dealing with Employers' Liability risks. The problem of how to successfully underwrite business which I have attempted to deal with is admittedly not simple, but, for this reason alone, it is all the more interesting. It may be thought that some of the points which I have considered are of theoretical rather than practical use, and that it would be impossible to write business on the lines I have suggested. Many of the points, however, which at first appear to be difficulties will, on application, be found to vanish, and I fully believe that in time to come we shall be able to apply to the underwriting of this class of business the motto, "*Certum ex incertis.*"

# THE APPLICABILITY OF LIFE ASSURANCE TO MODERN NEEDS.

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By SAMUEL JACKSON, F.F.A. (Scottish Widows' Fund).

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*A Paper read before the Insurance Institute of Birmingham,  
31st January, 1913.*

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WHEN your Honorary Secretary did me the honour to invite me to read a paper before this Institute I readily accepted the invitation on condition that it should be of an elementary character; and he was good enough to assure me that such a paper would be acceptable to your Council. The choice of a subject was the next consideration, and I endeavoured to choose one which would be instructive to the younger members—for whose benefit, as I understand it, these Institutes are intended—and at the same time possibly prove of general interest. Should I be so fortunate as to accomplish this two-fold object, I will consider myself well repaid for the time spent in the preparation of the paper.

I wish you this evening to imagine an Insurance Office as one of those huge establishments, known as universal providers, in which one can purchase any article “from a needle to an elephant,” as the saying goes. This emporium of Insurance contains many departments: Fire, Life, Accident, Employers' Liability, and others too numerous to mention; and each department is provided with several stalls, on which the various articles offered to the public are displayed. This evening we are concerned with only one of these departments, namely “Life”; but in it I think we will find much to interest us, and by examining its contents critically I hope we may derive some instruction as well.

The analogy between an Insurance Office and a store is not altogether fanciful; it is true to fact—for, after all, Insurance is a commercial enterprise, differing only from other business undertakings in being more technical and extending in most

cases over a longer period. The volume of business transacted will depend on a variety of considerations—for instance, the extent to which the commodities offered for sale (in our case Life Policies) meet a public want, the quality of the goods, the degree of attractiveness with which they are presented to prospective customers, and (most important of all in these competitive days) the ability of the salesman—by whatever name he may be called—whose province it is to dispose of his employers' wares.

My first purpose is to demonstrate the applicability of Life Assurance to the varied requirements of modern life; and, secondly, I propose to shew briefly how the policies obtainable at the present time can be adapted to meet unforeseen changes in the circumstances of the assured.

The policies for sale in the Life department are many and various. It would not be easy to mention any risk contingent on the duration of human life that is not provided against by one form of policy or another, and consequently it is becoming increasingly difficult to devise any scheme, or combination of benefits, that does not already appear in the prospectus of at least one Company. Perhaps the most useful method of illustrating the applicability of Life Assurance will be to take each class separately and consider the diversity of uses to which it can be applied. Let us, then, follow that course and see where it will lead us.

## I. WHOLE LIFE POLICIES.

(a) As you are aware, this is one of the oldest forms of Assurance, under which the sums assured are payable at death only. Obviously it answers the purpose of any person who wishes to make provision for wife, children, or other dependants, or, in short, for anyone who would suffer pecuniary loss by the death of the assured. I do not propose to occupy time in enlarging on this view of Assurance, as it is familiar to all. I will merely remind you that on the death of the assured the policy-moneys may be allowed to remain in the Company's guardianship for distribution to the family in instalments spread over a fixed term of years. The advantage of this arrangement lies in the fact that the fund is managed by a trustee who is both permanent and reliable, and the widow is

thereby saved the trouble and possible loss incidental to investments. Again, a husband can effect a policy under which his widow will receive an annuity for the remainder of her life, and thus be relieved of anxiety for the future. Hence, such policies are frequently made the subject of marriage settlements. So much for *Family Life Assurance*.

(b) Whole Life Assurance, however, has many other uses. A business man, for example, desiring to extend his operations, finds himself handicapped by lack of capital. A friend, or other capitalist, having confidence in the borrower's integrity and ability, agrees to advance the necessary sum, provided he is protected against loss through the death of the borrower before repayment of the loan. Here, again, we have an example of the applicability of Whole Life Assurance, which provides the requisite cover and forms what is called in such connection—collateral security. The borrower usually assures his life in favour of the lender or effects a policy in his own name and assigns it to the lender by separate deed.

(c) Partners in business or profession wish to be secured against financial loss through the death of one of their number. Such loss may be occasioned by withdrawal of capital or services or both; and a Whole Life Assurance on each life affords the desired protection to the other partners. [We will consider this subject further when we come to deal with Joint-Life Assurance.]

(d) A landed proprietor is desirous of leaving his estate to his heir unencumbered—that is, free from the heavy duties imposed by Government on large estates. There has been a great increase in Death Duties since the Act of 1894, and they now constitute a very serious burden on legatees. An assurance payable on the death of the present owner is well adapted to meet the charge, especially as Life Companies are willing to pay over to the Authorities the whole of the duty if the amount payable under the policy is sufficient to cover it, or, if not, the whole of the policy-moneys in part payment—and that before Confirmation or Probate has been granted. There is, therefore, no occasion to mortgage the estate or to realise any part thereof to meet the duties if a policy of adequate amount has been effected.

(e) Suppose a person (A) to be entitled for his life to the income produced by a certain fund, provided he survive the

present recipient of the income (B), and that (A) wishes to borrow on his expectation. Except as a speculation, largely dependent on the health of (B), the expectation of (A) possesses no value; but it can be converted into a marketable investment by the aid of a policy payable on the death of (A). A Whole-Life policy is required in this case because the lender must be protected whether (A) dies before (B)—in which event (A) would never receive any income from the fund—or whether (A) dies after he has entered upon the life-interest. The sum which a lender can safely advance on such a security is a nice calculation for the actuary.

[I may here remark that if (A) be entitled to a sum of money instead of an income for life in the event of his surviving (B), the policy to be effected need only be payable should (A) predecease (B). This is an example of what is known as Contingent Survivorship Assurance, and I need not refer to it again.]

In all the instances mentioned to which Whole Life Assurance is applicable, the premiums might suitably be made payable throughout life, but in certain cases it is advisable to limit them to a definite number. For example, when family provision is the object, it is surely advisable to adopt the limited-payment plan. It is notorious that those who are fortunate enough to reach the allotted span of life are inclined to grudge the continued payment of premiums; but, apart from that, many a man, on retirement from active work, is compelled to live on a diminished income, and would welcome relief from payments which are apt to become a burden. The advantages of the limited-payment plan are briefly these:—

1. The assured knows from the outset the maximum amount he can be called upon to pay.
2. The term can be so fixed as to coincide with the probable retiring age, in which case the whole of the premiums payable will fall within the productive years of life.
3. In the event of the policy being discontinued at any time before all the premiums are paid, the assured is entitled to convert it into a paid-up assurance for a reduced sum, which sum is usually calculated by taking the exact proportion of the original sum assured that the number of premiums paid bears to the number agreed to be paid.



It may not be known to you all that the Limited-payment Table has been in vogue since the year 1816, and I must confess to a feeling of surprise that its advantages were not earlier recognised. To judge by the number of elderly policy-holders who are now bemoaning the fact that they did not adopt the plan, we must conclude either that the Table was kept in the background by the Companies or that it was offered to the proposer and declined on account of the higher premium involved. It seems to me like viewing at the same object through opposite ends of a telescope. "The little more and how much it is" may be said of the premium regarded as a future liability, but how insignificant the "little more" seems when viewed from the other end of the term.

## II. JOINT-LIFE ASSURANCE.

Under this class a husband and wife can assure, the policy-moneys being payable at the first death. Although legally a man has no insurable interest in the life of his wife, as his wife, and therefore cannot assure her life, unless such interest exists on other grounds, there is no legal objection when the assurance is effected on their lives jointly. Sometimes a wife is virtually her husband's business as well as his domestic partner, inasmuch as she assists him in his business, and he has thus a very real interest in her life. In such circumstances to effect a joint-life policy would appear to be a natural and prudent proceeding, and as a matter of fact it is of frequent occurrence.

This brings us to the consideration of Joint-Life Assurance for partnership purposes. Imagine a not unusual case—namely, that of two persons starting in business together, one of whom possesses the brains and the other the capital. Suppose that by energetic work and wise management the business grows until eventually it becomes one of the most successful of its kind. Then death overtakes one of the partners. Should it be the capitalist, the surviving partner may find himself in financial difficulty, unless he can arrange to retain his late partner's capital at interest; but even so, how much better it would be for him if he could repay the amount out of the proceeds of a Life Policy! This would enable him to carry on the business for his own benefit or to assume another partner on his own terms. On the other hand, if the active partner

died first—he whose commercial ability had been responsible for the prosperity of the concern—consider the position of the remaining partner. Not being competent to conduct affairs alone, he must either retire or find another partner possessing the requisite ability. In either event there will be serious risk of loss, whereas the receipt of a substantial sum under a Life policy would probably have enabled him to retire with a comfortable competency.

Most Companies now grant an option by which, with the consent of all the parties interested, these policies can be divided into separate assurances of equal amounts on the lives of the individual partners; and the value of that option in case of dissolution of partnership is obvious. Notwithstanding this privilege, however, a joint-life policy is not in my opinion the ideal form of partnership assurance, for this reason: Whenever the first death occurs, the policy-money is paid to the survivor, and there the transaction ends. The remaining partner is left without any assurance on his life (so far as that policy is concerned at any rate) at a time when he may urgently require it. If in the meanwhile he has become ineligible for assurance from any cause, his position is desperate; and even if he is still acceptable at tabular rates the cost will be greater on account of increased age. He may wish to take another partner, when an assurance would be very desirable, if not essential; or he may continue in business on his own account, when one can imagine that a Life policy for family purposes might become more necessary than ever.

The plan that appears to me best adapted to meet the requirements of partners is to effect separate whole-life policies on each life. The advantages of this method are:—

- (1) If the partnership be dissolved, each partner can regain control of the policy on his life, and deal with it as circumstances at the time may dictate.
- (2) If one of the partners dies, the policy on his life will satisfy all claims by his representatives, and the survivor will remain assured under his own policy.
- (3) If the survivor decides to assume another partner, the new-comer has merely to provide a policy on his own life.

These remarks apply equally, of course, when there are more than two partners.

- (4) So far as I am aware, rebate of income-tax is *not* allowed under joint-life assurances, as it *is* (up to one-sixth of the assured's income) under assurances effected by a man on his own life. This is an important consideration in view of the rates of income-tax at present imposed and the unlikelihood of any immediate reduction.

You will no doubt expect me to make reference to the relative *cost* of separate and joint-life policies. Comparisons between the two methods may be made roughly in the following way, and I recommend you to try a few for yourselves. On one side of the account place the annual joint-life premium; assume the claim to fall in by the death of the *older* life, at the end of the joint "expectation of life"; then multiply the premium by that number of years, and you have the total cost of the assurance. Deduct that total from the sum payable, and the result will be the difference in favour of the policy. On the other side of the account, place the combined annual premiums for separate policies—each equal in amount to the joint-life assurance—multiply by the same number of years as before, and deduct the total from the sum payable under the policy; then add to the result the surrender value of the existing policy of the life of the survivor. You can now compare the two sides of the account. Such comparisons are useful as well as interesting, and if the Company selected grants liberal surrender values I think you will find the separate policies compare favourably by this rough-and-ready method with the joint-life assurance for most combinations of ages. I have made many calculations on these lines and find the results as stated, though they necessarily vary with the ages at entry. To make a strict comparison, however, we should allow for interest on the difference in the premiums; but, on the other hand, there is the possibility of the *younger life dying first*, in which event the larger surrender value under the remaining policy on the older life would increase the balance in favour of separate policies.

### III. SHORT-PERIOD OR TEMPORARY ASSURANCES.

This is the earliest-known form of Assurance, and, as its title indicates, the sums assured are payable only if death occur within a fixed period. The term "Short-Period" does not,

however, seem particularly applicable in the case of some Companies, which issue these policies for periods extending to 30 years or more. One Company embodies in its prospectus two Tables, under the respective headings "Short-Period Policies" and "Long-Period Policies." The two are identical in principle and differ only in the number of years for which they are granted. We are concerned to-night, however, with the *uses* to which Short-Period policies may be applied, and I will mention a few:—

- (1) To provide collateral security in connection with temporary advances by bankers or others.
- (2) For business purposes, such as temporary partnerships, when the period of risk is strictly limited.
- (3) To render a contingent benefit absolute, thus converting it into a marketable security—as, for example, when a legacy is payable only if the beneficiary attain a certain age.
- (4) To cover depreciation in the value of investments, when such depreciation is likely to be only temporary.
- (5) Suppose a donor has promised a number of annual donations towards a special object, but only provided he lives to make them. Such a case occurred within my knowledge in connection with the building of a church, and the Committee effected a decreasing Short-Term Assurance on the donor's life, thus securing the whole of the donations promised.

It has been shewn that these policies are suitable when the risk is restricted to a limited period. Prudence suggests, however, that there should be no doubt on this point, otherwise, the policy having run out, the life may unfortunately have become unassurable. Such risk may be avoided by effecting at the outset a policy of a more elastic nature—I refer to that known as

#### IV. CONVERTIBLE TERM ASSURANCE.

Under this class of policy, the sum assured is payable if death occur within a stipulated period—as under Short-Period assurance—but in addition it embodies the option of conversion into ordinary Whole-Life or Endowment Assurance *without medical examination*, provided the change be effected before



the last five years of the term are entered upon. The premiums charged are slightly higher than those under Short-Term policies for similar periods, to cover the contingency of the life being ineligible for assurance at ordinary rates at the date of conversion. Assuming the change to be effected at the beginning of the last five years, the assured has then to decide whether he will (1) discontinue the policy, (2) continue it, at the original premium, to the end of the term (when the policy will automatically become a 5-year *term* assurance), or (3) change to an ordinary assurance at the rate of premium applicable to the age attained. Most Companies limit the age at which this change can be effected to 65, for the reason that the risk in dispensing with medical examination is very great at older ages, and would require such an addition to the premiums as to render them much less attractive, if not prohibitive.

Convertible Term Assurance undoubtedly meets the requirements of many to whom ordinary policies do not appeal. Many business men, for example, argue that their capital can be more profitably employed in their business than by putting it into Life Assurance, and therefore the investment aspect of a Life policy has little, if any, attraction for them. They are inclined to regard Life Assurance from the same standpoint as Fire Insurance—that is, the covering of a specified risk from year to year; and whether the cover be for family provision, partnership purposes, or security for an occasional overdraft, they wish it at the lowest possible cost. A Whole-Life policy they consider too expensive, and, on the other hand, they are too shrewd to take Short-Term assurance, which, though cheap, lacks the quality of permanence: hence they favour the Convertible Term policy, which combines cheapness and the right to continue on a permanent basis at a future date.

## V. ENDOWMENT ASSURANCE.

Though of comparatively recent growth, this is without doubt the most popular form of assurance to-day, and not without good reason, as I will presently shew. The sum assured is payable on attainment of a stipulated age—or, to be more exact, on survivance of a certain number of years, as most Companies now pay on the expiry of the period for which the



last renewal premium is payable—while in the event of earlier death, the sum assured is payable to the assured's representatives as in the case of Whole-Life assurance. It is not surprising that Endowment Assurance is popular, for it combines in itself the advantages of Whole-Life Assurance (*i.e.*, protection for dependants in the event of early death) and provision for the assured's own later years; and incidentally it constitutes what may justly be termed "a gilt-edged investment."

To my mind the most important feature of Endowment Assurance is the provision it secures for old age. Even the most thoughtless person, I should imagine, must sometimes reflect that the time may come when he will require for the support of life in comfort, and perhaps even for bare subsistence, more than he can earn by his own labour; and therefore, unless he is in the fortunate position of having an income absolutely secured, it is the highest wisdom now, while his income is more than sufficient for present needs, to make such provision for the future as his means will allow—in short, to make the fat years provide for the lean. Endowment Assurance is thus peculiarly suitable for business and professional men (or women) who have no fixed pension to look forward to, and whose earnings must therefore do double duty, that is, provide for present necessities and also for future contingencies.

Let us now consider Endowment Assurance as an investment. I have already described it as "gilt-edged," and one associates that term, not with high rates of interest, but rather with perfect security and a moderate return. Nevertheless, in our best Companies, Endowment Assurance yields a return of from 3 to  $3\frac{1}{2}$  per cent. at maturity, allowing for rebate of income-tax—that is to say, the total sum payable on survival of the endowment term is equivalent to the premiums, less income-tax, accumulated regularly from year to year at from 3 to  $3\frac{1}{2}$  per cent. compound interest, while if death had occurred before the expiry of the term the value of the policy as an investment would, of course, have been enhanced. Thus, whether the policy-moneys become payable by death or survival, the transaction cannot be otherwise than profitable to the assured or his representatives. There are, of course, other forms of investment which *might* yield a higher return over a term of years, but taking into consideration all

the points in favour of Endowment Assurance—*e.g.*, the saving of trouble in finding safe and profitable investments for comparatively small sums; the elimination of all risk of depreciation, and consequent anxiety; the easy method of purchase (annual premiums) and quick realisation of the policy at death or survival; and, last but not least, the protection it affords from payment of the first premium—all things considered, an Endowment Assurance cannot but be regarded as an extremely satisfactory investment.

I have employed the term “investment” many times in the course of my remarks, and I have done so advisedly; for it is an unfortunate fact that many men, especially *young* men, after industriously accumulating a little capital, allow themselves to be persuaded by the promise of large and speedy profits to enter into speculations which can only end in disappointment and loss. No doubt the gambling spirit which is so prevalent in these times militates to a certain extent against those forms of investment which yield a rate of interest only as high as is consistent with absolute security—of which Endowment Assurance is undoubtedly one of the best—but notwithstanding this speculative tendency, it is apparent from the increasing volume of Endowment Assurances effected that their sterling merits are appreciated by many. It may interest you to hear the latest available figures, contrasted with those of previous years, shewing the amount of these assurances in force. In a paper read before this Institute as far back as March, 1895, Mr. H. W. Andras gave the following particulars.

From the Board of Trade returns issued in 1888 (the first year, by the way, in which the Government Actuary introduced the interesting “Summary of Assurance in force as shewn by the last Valuation Returns of the Companies”) we find—

	Whole-Life Policies.		Endowment Assurances.
1888 volume,	90·4 per cent.	} of total business in force.	6·2 per cent.
1894     ,,	83·2     ,,		13·2     ,,

At this point the figures furnished by Mr. Andras perforce come to a stop, but he found in them sufficient warrant for saying—“The figures shew a remarkable general movement on the part of the assuring public in the direction of Endowment

Assurances, the assured giving special preference to those on the profit scale. *We*, however, are in a position to carry the comparison much further. Ten years later we find—

	Whole-Life Policies.		Endowment Assurances.
1904 volume,	68 per cent.		27 per cent.
1909 „	61·6 „	} of total business in force.	33 „
1910 „	60·3 „		34·2 „
1911 „	59·9 „		34·4 „
1912 „	56·7 „		35·8 „

You will observe that the increase is not so marked when we take consecutive years, but it is always steady; and I imagine we will all agree in the opinion that Endowment Assurance, with its many valuable options and advantages, will continue to grow in popular favour. One of my reasons for thinking so is this:—I observe from the latest volume of the Board of Trade returns that the average of the Whole-Life policies in force is £450, while that for Endowment Assurance is only £170—a fact which I think furnishes unmistakable evidence of a keen desire on the part of the middle and lower-middle classes to make provision for old age.

## VI. CHILDREN'S POLICIES.

No paper of this kind would be complete without a reference to the various policies issued for the benefit of children. Insurance on their lives are restricted by law to £6 if the child is under age 5 and to £10 if under age 10. Such insurances, which are granted extensively by the Industrial Companies, are effected for the most part by the poorer classes with the primary object of providing for funeral expenses. Ordinary Life Companies, however, as a rule, confine their operations, in the case of children under age 10, to granting policies under which there is no immediate *death* benefit (and therefore no medical examination), but which are intended for the ultimate benefit of the children themselves. I refer to Children's Endowments, Educational Endowments, and Deferred assurances.

Under the Endowment plan, the sum (or endowment) is payable on the child attaining a fixed age—say 21—or surviving a specified period. In the event of the child's previous

death, the premiums paid are usually returnable without interest, but if desired they can be made either *non*-returnable or returnable with interest at (say) 2,  $2\frac{1}{2}$ , or even 3 per cent., the premiums varying, of course, with the plan selected. The utility of these policies to parents or guardians is obvious, for they are thus enabled to provide by easy instalments, for sons or wards, the necessary capital to start them in business or profession, or, for daughters or wards, a suitable dowry on marriage. In the latter case, should the Endowment become payable before the question of marriage is on the tapis, most Companies would be willing to retain the capital at interest until required, or at least for a term of years.

Prior to the advent of these Endowments the plan generally adopted by prudent parents to make provision for children was to open Savings Bank accounts for them, but the drawbacks to that method are, the absence of obligation to make regular payments and the facility of withdrawing deposits at any time. Endowments are well adapted to remove these objections, for the premiums fall due with unfailing regularity, and once paid they cannot, as a rule, be withdrawn without loss. In addition to these advantages over ordinary modes of saving, the interest return on the premiums invested is better, at maturity of the policy, than the rate allowed by Savings Banks. To overcome the objection that might be raised should premiums be forfeited in case of discontinuance, liberal surrender values are guaranteed, or in lieu thereof, proportionate paid-up policies, these being calculated in the same manner as under Endowment Assurances, and as already described under Whole-Life limited-payment policies. Further, to obviate the possibility that the death of the parent, or other person who pays the premiums, may leave the upkeep of the policy a burden on others, a slightly-increased premium will secure in that event total exemption from payment of further premiums, without otherwise affecting the policy.

Having described Children's Endowment so fully, it is unnecessary to say much about Educational Endowments. They are similar to ordinary endowments, with the exception that instead of paying the amount in one sum at maturity, the Company undertakes to make a series of periodical payments. As their name indicates, these policies are usually effected by parents and others to defray the cost of the last few years of



education, when a son may be taking a University course or receiving special tuition previous to entering the profession of his choice; or when a daughter may wish to prepare for one of the several careers now open to women. The expense of higher education is sometimes extremely burdensome on parents—some here are now passing through the experience—unless they have had the means and the forethought to make provision by means of Educational Endowments.

We will now glance briefly at Deferred Assurances for children, sometimes called Thrift or Early Thrift policies, which are a product of the last quarter of a century or thereabouts. Devised originally to meet a real public need, I think we may fairly claim that they are admirably fulfilling their purpose. By means of one of these policies, a parent, for a premium of about £9 a year, can secure for a child aged 1 next birthday an assurance of £1000 payable at death, with profits—both assurance and profits beginning at age 21—which, if effected at that age, would cost about £21 a year. No medical examination is required; if death takes place before age 21 the premiums paid are returned in full; and if the policy is discontinued a liberal surrender value is allowed. It should be mentioned, however, that though medical examination is dispensed with, enquiry is made regarding the immediate family history and the condition of the child's past and present health, before granting the policy. At age 21, several valuable options come into force, any one of which may be selected. For example, amongst others—

1. The policy may be continued at the original premium for the full £1000, with profits, payable at death.
2. It may be converted, without change of premium, into an Endowment Assurance for a reduced amount, payable at any age from 30 upwards, or at previous death.
3. It may be exchanged for a Paid-up policy, either Whole-Life or Endowment Assurance, for a reduced amount.
4. It may be surrendered for a cash payment—usually a sum equivalent to the premiums paid accumulated at about  $2\frac{1}{2}$  per cent. compound interest.

Deferred Assurances commencing at age 25 instead of age 21 are also issued, and I think we may assume that Companies would be willing to quote for any age between these two.



Some years ago a well-known Actuary said in regard to Deferred Assurances—"No better proof has been given of the adaptability of Life Assurance to social needs," and he also expressed the opinion "that such policies are likely to become much more numerous as their possibilities are more widely known." Unfortunately the Board of Trade Summary does not state this class of business separately—it is included under the general heading "Miscellaneous"—therefore I have no figures to submit to you. An examination of the Valuation Returns of several Companies, however, reveals the fact that since those words were uttered a remarkable development has taken place in this form of policy. I sometimes wonder what the ultimate effect will be on our business generally if the same rate of increase is maintained. Several possibilities occur to one, giving rise to questions such as these:—

In what proportion of cases will the cash option be exercised? and if, as seems probable, it is exercised only in the case of "good" lives, what will be the effect of such selection on the rate of mortality among those who continue?

Again, how will the amount of future new business transacted on ordinary Tables be affected? If a young man acquires a substantial policy at age 21 or 25, he will not likely require additional assurance at the moment; on the other hand, he may thereby be encouraged to apply for more while he is still young.

Once again, when the fortunate recipient of a Deferred Assurance in due time becomes a father, will not his appreciation of the gift induce him to do as much for his own children?

Time alone will furnish an answer to these and similar questions. In the meantime, I think the Companies may safely accept as much of this desirable class of business as they can obtain, subject, of course, to wise selection.

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It happens occasionally that no Table in our prospectus exactly meets the requirements of a particular individual. In the majority of such cases, however, it will be found that the difficulty can be overcome by combining the benefits of two or more policies. For let me remind you that modern Life Assurance can accomplish anything in reason, and that progressive Companies will readily quote a premium for any risk

that comes under the broad, general term—"Life Assurance." Let me give you an example of what I mean by combination of benefits.

Suppose an enquirer is hesitating between Whole-Life assurance by limited payments and Endowment Assurance. He says—"If I knew what my circumstances would be at age 60, I would, of course, have no difficulty in deciding. If I take the Whole-Life policy I may wish to convert it into cash at age 60 or thereabouts, which I could only do by surrendering the policy, and from my point of view that would not be a profitable transaction. On the other hand, should I take an Endowment Assurance and find at age 60 that, owing to family or other considerations, I require insurance rather than cash, I cannot get it without passing a medical examination, which might then be impossible. Can you offer me a policy that includes the option I require?"

What our friend wishes is to have the benefits of both policies combined in one contract, and we can meet him. No Company, of course, could allow him to convert an Endowment Assurance into a Whole-Life policy of much larger amount without medical examination, nor can he receive under a Whole-Life policy all the benefits of Endowment Assurance, seeing he has been assured for many years at the lower Whole-Life premium. But he can have a policy under which the sum assured would be payable in full to his representatives if he died before reaching a stipulated age, while if he attained that age, *half* the sum assured would become payable to himself, leaving the remaining half payable at his death. The premiums can be made payable throughout life or be limited to any number as desired. This Table is known as "Double Benefit" or "Combined Benefit" Assurance, and though it is not found in many prospectuses, I have no doubt that most Companies would willingly quote for a similar combination of benefits.

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It is quite impossible in the limited time at our disposal to describe adequately all the various policies in the market, but I hope enough has been said to shew that present-day Life Assurance can, and does, cater for every requirement of modern times. Needless to say, this fact is a valuable asset to the Companies engaged in the business and to their outdoor

representatives, because it affords an almost unlimited field of labour. But though the field is wide the labourers are many; and if, as I imagine, the ideal salesman is the man who, in addition to the gift of salesmanship, has an intimate knowledge of the manufacture of the goods he sells, then it follows that the most successful salesman of Life Assurance (other things being equal) is likely to be the man who best understands the nature of the policies he offers. He needs to be perfectly acquainted with every weapon in his armoury, and to know when and how to use it—just as the skilful angler knows the particular kind of fly most likely to tempt the elusive trout. Such knowledge does not, as a rule, come by intuition; it is acquired at the cost of time and trouble. Therefore to those who feel a predilection for outdoor work I would say—Unless you happen to be one of those heaven-born geniuses who now and then arise in our midst, dazzling us with their brilliancy and making all lesser lights appear pale and insignificant, you must be prepared to learn that very important branch of our business (the art of securing proposals) by undergoing a hard, steady “grind” in the school of experience.

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I wish now to say a few words on the adaptability of Life policies when unforeseen circumstances render continuance in their original form impossible or undesirable. Those who have had practical experience in the business will, I think, agree with me that most policy changes are occasioned by financial misfortune. Some few, of course, are due to the opposite reason—unexpected prosperity; while others, again, are brought about by circumstances in which pecuniary considerations play no part.

When a policy-holder cannot keep up his premium payments, there are several courses open to him, *e.g.* :—

1. He can borrow money from the Office on security of his policy, at a very reasonable rate of interest, and free of expense when the title is clear. The amount of loan obtainable is usually within a small margin of the surrender value, and may be repaid at any time or left as a charge against the policy. The Loan option is very useful in times of temporary embarrassment.
2. He can reduce both policy and premium in any propor-

- tion, and the value of the portion surrendered can be taken in cash or can be applied to the reduction of premiums under the reduced policy.
3. He can discontinue premiums altogether and receive a fully-paid-up policy for a reduced amount.
  4. He can discontinue premiums as before, and remain assured for the full amount for a limited period. This, you will perceive, is a Paid-up Term policy, and is known as Extended Assurance.
  5. He can in the last resort surrender the policy outright for cash, the amount of which will depend upon the class and duration of the policy, the age of the life, and also on the practice of the particular Company.

When the change is occasioned by prosperity it generally takes the form of a higher-priced policy, such as a change from Whole-Life to Endowment Assurance. If the original policy (Whole-Life) has been in force for some years, one of the methods employed is to treat it as if surrendered and a new policy (Endowment Assurance) effected in its place. The increased premium under the new policy is then reduced by applying the value of the old policy to that purpose. The value allowed under the old policy would in most Companies be larger than if it were *actually* surrendered—considerably larger in some Offices—and I mention this to shew the desire on the part of the Companies to grant the best possible terms whenever a policy-holder wishes to change the form of the original contract.

Some Offices issue policies under which, for a small increase in the rate, the premiums cease for the period during which the life assured is totally incapacitated by sickness or accident, provided the incapacity continues for at least two months and that certain other conditions into which we have not time to enter are fulfilled. This seems to me to furnish another striking example of the adaptability of Life Assurance.

If I might venture to predict, I think one of the future developments of our business will be in the direction of still greater simplicity of contract, so that a policy-holder will know from year to year his exact position in regard to Bonuses and all the options I have mentioned. Some Offices have already travelled far in this direction, guaranteeing all values and leaving Bonuses alone subject to variation. Others are even prepared on special terms to include Bonuses in their

guarantees ; in that case, however, it seems to me that the term "Bonus" is a misnomer, as the policy becomes an *increasing* assurance, without profits.

### CONCLUSION.

There are several ways of concluding a paper of this description. Some writers favour a peroration abounding in appropriate quotations from the classics, while others, like Silas Wegg in "Our Mutual Friend," find themselves "dropping into poetry." I must not criticise either of these methods, because I intend to use them both to a limited extent ; and if you will bear with me for a few minutes longer I would like especially to offer to the younger men present a few words of practical, friendly advice.

It must be evident to you from what I have said, if it has not already been impressed on your minds by daily contact with the business of Life Assurance—1st, That there is a good deal to learn in it ; 2nd, that a superficial knowledge is not of much use nowadays ; and 3rd, that a thorough knowledge of its principles and practice can be gained only by earnest application and, it may be, some self-denial.

Two pictures present themselves to my mind, and I ask you to look upon each in turn. You all know the type of clerk who shirks a difficulty whenever it occurs in office practice. A policy-holder, let us say, comes in to ask a question : he cannot understand some point of importance to himself and is genuinely seeking information. The clerk possesses a smattering of knowledge on the subject, but has never got a grip of it, though not from lack of opportunity, and he is consequently unable to give a satisfactory explanation. But that, I fear, does not trouble him. He has acquired the trick of ingeniously evading awkward questions, and when he manages to get rid of the caller he returns to his desk feeling highly satisfied with himself. If his imagination were not defective it would follow the policy-holder (or perhaps it was a *prospective* policy-holder) and wonder what he thought of the interview and about the Company. Our friend, however, is not an imaginative person and does not realise whither he is drifting. *There* was a real, live problem clamouring for solution and he shirked it ; in other



words, *there* was a golden opportunity of adding to his store of knowledge and he refused it. To have successfully fought that difficulty to a finish would have made it his slave for ever, and I declare he gave in without striking a single blow. Consider the pity of it: every such act renders him less disposed to grapple with a difficulty, until in the end he loses all desire to learn and degenerates into a mere cypher!

But let us leave the contemplation of this unpleasant picture and turn to the other and brighter one. It represents a very different type of young man—bright, alert, and determined—quick to seize every opportunity to gain fresh knowledge. It has been truly said that opportunity does not *make* the man, it only *finds* him; and this young man is working in the hope of one day being discovered. Whenever a difficulty presents itself he is eager to try conclusions with it, and such encounters have given him facility in calling up his powers at a moment's notice. The fight may be brief or it may be long drawn out, but the issue is never in doubt. Once thoroughly conquered, this bit of knowledge is docqueted and filed, and when required it will come forth at the bidding of its rightful owner. Is it surprising that such a man becomes in time a veritable mine of knowledge, a power among his fellows, and marked out for promotion?

Perhaps you think this picture is painted in too-glowing colours—that this young man is too good to be real. Not so: he is only flesh and blood, and has his failings like the rest of us—if we wish to be lenient we might describe them as “the defects of his qualities.” He will likely be very intolerant of his neighbour's ignorance, while his contempt for the slacker will be too utter for words. *The worker and the shirker never did pull well together!* Again, he will probably be a source of constant worry to his superiors, by reason of his impatience to get on. Having qualified himself and proved his capacity he begins to chafe if promotion is delayed. Longfellow's lesson is only half learnt: he has learned to *labour* but not to *wait*—that will always be a hard lesson for ambitious youth. But let us pass lightly over these failings for the sake of his many excellent qualities.

Now for my word of advice, which you may treat as our Directors treat proposals for assurance—accept, reject, or compromise by accepting with reservations. It is this—*Do not*

*shun the way of knowledge because it is hard.* First master the ordinary routine work and then accustom yourself to face the big problems. If you cannot solve them unaided, ask the man next above you. Should *he* fail you, go to your Secretary or Manager and ask him to put you in the way of obtaining the enlightenment you seek. Do not be disheartened by occasional failure—"Ambition should be made of sterner stuff." The greater the obstacles, the greater must be your determination to overcome them. The knowledge you desire is to be had, and you will surely find it if you seek diligently. In the days when there were no Text-books, students had to wrestle with the problems of actuarial science, and win through by much hard thinking and burning of the midnight oil. What was the result? As you know, there were giants in those days. Similarly in other branches of learning, the pages of biography abound with instances of men of few opportunities who nevertheless attained to distinction and even fame.

"That which the worker winneth shall then be his indeed,  
Nor shall half be reaped for nothing by him who sowed no seed."

Therefore, be optimistic. Recently I came across this passage in a speech—"No optimism is worth its salt that does not go all the way with pessimism and arrive at a point beyond," by which I understand that optimism of the right sort recognises all the difficulties that pessimism can possibly conjure up, but possesses a vision which sees beyond to their final solution. If that be so, let us all be optimists in the best sense, and go forward with confidence. Think every question out for yourself, concentrate the full force of your mind upon it, turn it round and round and inside out until you get to the very heart of it. Proceeding thus, you will be amazed at the amount of knowledge accumulated in a single year; you will begin to feel that delicious sense of power that comes with knowledge; the mental discipline involved will go far to mould and develop your character on right lines; and finally you will find, unless I am much mistaken, that your qualifications will always command a ready and profitable market in the Insurance world.

"There the workman sees his labour  
Taking form and bearing fruit,  
Like a tree with splendid branches  
Rising from a humble root."



# THE NECESSITY OF ACCUMULATED FUNDS IN LIFE ASSURANCE.

By W. A. ROBERTSON, F.F.A.,  
Actuary to the Century Insurance Company, Limited.

*A Paper read before the Insurance Institute of Dundee,  
January, 1913.*

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## INTRODUCTORY.

When invited to read a Paper before your Institute, I felt that I could not do better than make a few remarks on the necessity of Accumulated Funds in Life Assurance.

I am aware that the subject is an excellent one if only for the reason that it is frequently discussed, not only by Insurers—I use the word in its widest sense—but by the Insured.

I am not, however, without fear that you will find much of what I have to say has already been better said by someone else. I have also to admit that when I came to put into writing the ideas that I had formed on the subject I found that the topic is more easy to discuss than to explain within the limits of a Paper.

That the subject is an important one admits of no doubt, and if in my Paper I should succeed in making clearer to your minds the necessity for the Accumulated Funds of the Life Assurance Companies I shall feel that I have altogether attained the object of this paper.

I would like to express my grateful thanks to Mr. J. S. B. Wilson, F.F.A., for valuable assistance in checking the Tables.

I wish also to say that the figures which are given on pages 169, 170, and 172 are taken either from the Paper by Mr. George King (J.I.A., XXXVII., 453) or from the Paper by Dr. James Buchanan (J.I.A., XLI., 18).



## THE NECESSITY OF ACCUMULATED FUNDS IN LIFE ASSURANCE.

At the outset, the present value of the benefit under a Life Assurance Policy is exactly equal to the present value of the premiums payable. With the lapse of time the conditions alter. The date at which the benefit is to become payable approaches, *i.e.*, the value of the benefit increases. On the other hand, the number of premiums remaining to be paid diminishes, *i.e.*, the value of the future premiums diminishes. The difference between the value of the benefit and the value of the future premiums constitutes the Reserve under the Policy, and is the sum which the Office must have in hand to provide for that portion of the risk that is not covered by the future premiums.

It may be interesting to see for ourselves exactly how these Reserves arise under the various schemes of Life Assurance.

We shall assume that each of 91,942 persons, all aged exactly 30, takes out a Whole Life Assurance of £1 at a yearly premium at the rate of £1 15s. 10d. per cent. Consider the following Table (p. 154).

Column 2 gives the Fund at the commencement of each year. Column 3 is the premiums paid at the commencement of each year. The addition of these two Columns gives the Fund in hand at the commencement of each year after payment of the premiums. Column 5 is the Interest earned during each year at the rate of 3 per cent. The addition of Columns 4 and 5 is the Fund at the end of each year before payment of the Claims. The Claims during each year are given in Column 7. The amount in hand at the end of each year, otherwise the Reserve or the Accumulated Fund, is the difference between Column 6 and Column 7.

In the early years of duration the Annual Premium for a Whole Life Assurance by uniform premiums is always greater than is required for the risk during these years, but the excess must be carefully retained in hand and accumulated at Interest in order to provide for that later period when the premium is insufficient for the current risk, and it is therefore necessary to draw on the Reserve to make up the deficiency.

The principle affecting Reserves will be more easily understood if we consider Tables II., III., and IV. which relate to Short Term Insurances, Pure Endowments, and Endowment Assurances respectively.

TABLE I.

## WHOLE LIFE ASSURANCES.

Year. (1)	Fund at Commencement of Year. (2)	Premiums paid at commence- ment of Year. (3)	Sum of (2) & (3). (4)	Interest earned in Year. (5)	Sum of (4) & (5). (6)	Claims in Year. (7)	Fund at end of Year. (8)
1	—	£1,646	£1,646	£49	£1,695	£547	£1,148
2	£1,148	1,636	2,784	84	2,868	567	2,301
3	2,301	1,626	3,927	118	4,045	589	3,456
4	3,456	1,615	5,071	152	5,223	611	4,612
5	4,612	1,604	6,216	187	6,403	633	5,770
6	5,770	1,593	7,363	221	7,584	657	6,927
7	6,927	1,581	8,508	255	8,763	681	8,082
8	8,082	1,569	9,651	290	9,941	705	9,236
9	9,236	1,556	10,792	324	11,116	729	10,387
10	10,387	1,543	11,930	358	12,288	756	11,532
etc.	etc.	etc.	etc.	etc.	etc.	etc.	etc.

This Table is intended to show what might be called the Finance of Life Assurance.

The figures relate to 91,942 Whole Life Assurances taken out at age 30 next birthday, the Sum Assured in each case being £1, and the premium £1 15s. 10d. per cent.

TABLE II.  
SHORT TERM INSURANCES.

Year. (1)	Fund at Commencement of Year. (2)	Premiums paid at Commence- ment of Year. (3)	Sum of (2) & (3). (4)	Interest earned in Year. (5)	Sum of (4) & (5). (6)	Claims in Year. (7)	Fund at end of Year. (8)
1	—	£641	£641	£20	£661	£547	£114
2	£114	637	751	23	774	567	207
3	207	633	840	26	866	589	277
4	277	629	906	27	933	611	322
5	322	625	947	28	975	633	342
6	342	620	962	29	991	657	334
7	334	615	949	28	977	681	296
8	296	611	907	27	934	705	229
9	229	606	835	26	861	729	132
10	132	601	733	23	756	756	—

This Table is intended to show what might be called the Finance of Life Assurance.

The figures relate to 91,942 Short Term Insurances taken out at age 30 next birthday for a term of 10 years, the Sum Assured in each case being £1, and the Premium 13s. 11d. per cent.

TABLE III.  
*PURE ENDOWMENTS.*

Year. (1)	Fund at Commencement of Year. (2)	Premiums Paid at Commencement of Year. (3)	Sum of (2) and (3). (4)	Interest earned in Year. (5)	Sum of (4) and (5), being Fund at end of Year. (6)
1	—	£7,446	£7,446	£223	£7,669
2	£7,669	7,402	15,071	452	15,523
3	15,523	7,356	22,879	686	23,565
4	23,565	7,308	30,873	926	31,799
5	31,799	7,259	39,058	1,172	40,230
6	40,230	7,208	47,438	1,423	48,861
7	48,861	7,155	56,016	1,681	57,697
8	57,697	7,099	64,796	1,944	66,740
9	66,740	7,042	73,782	2,213	75,995
10	75,995	6,983	82,978	2,489	85,467

This Table is intended to show what might be called the Finance of Life Assurance.

The figures relate to 91,942 Pure Endowments taken out at age 30 next birthday for a term of 10 years, the Sum Assured in each case being £1, and the Premium £8 2s. per cent.

TABLE IV.  
ENDOWMENT ASSURANCES.

Year. (1)	Fund at Commencement of Year. (2)	Premiums Paid at Commence- ment of Year. (3)	Sum of (2) & (3) (4)	Interest earned in Year. (5)	Sum of (4) & (5) (6)	Claims in Year. (7)	Fund at end of Year. (8)
1	—	£8,087	£8,087	£243	£8,330	£547	£7,783
2	£7,783	8,039	15,822	475	16,297	567	15,730
3	15,730	7,989	23,719	712	24,431	589	23,842
4	23,842	7,937	31,779	953	32,732	611	32,121
5	32,121	7,884	40,005	1,200	41,205	633	40,572
6	40,572	7,828	48,400	1,452	49,852	657	49,195
7	49,195	7,770	56,965	1,709	58,674	681	57,993
8	57,993	7,710	65,703	1,971	67,674	705	66,969
9	66,969	7,648	74,617	2,239	76,856	729	76,127
10	76,127	7,584	83,711	2,512	86,223	756	85,467

This Table is intended to show what might be called the Finance of Life Assurance.

The figures relate to 91,942 Endowment Assurances taken out at age 30 next birthday for a term of 10 years, the Sum Assured in each case being £1, and the Premium £8 15s. 11d. per cent.



It will be noticed that in the case of the Short Term Insurance the premium is only slightly greater than is required for the risk during each year, and as a consequence the Reserve or Accumulated Fund is small. After five years the premium is insufficient to cover the risk, and as a consequence it is necessary to draw on the Reserve to meet the Claims. Again the Reserve disappears, as of course it should disappear, at the end of the ten years, when the Insurance expires. We have here a very good example of the necessity for the Accumulated Fund. Without such a Fund the Office after five years would be unable to meet the Claims that arise.

In the case of the Pure Endowment the premiums paid, not only by those who survive to the end of the ten years, but also by those who have died during the ten years, must be accumulated in order to provide for the Sum Assured that is payable to the survivors at the end of the ten years. This will be clear from the Table.

Under the Endowment Assurance the Reserve is, of course, greater than under the other forms of Insurance, and, as in the case of the Pure Endowment, the amount which is in hand at the end of the ten years, otherwise the Accumulated Fund, is exactly equal to the Maturities.

It has been contended that the Reserves that are held by the Offices are unfair, for at least two reasons:—

First, that the Offices ignore entirely in their calculations the Law of Averages which applies to what has been called the Operative Life of the Policy; and

Second, that the rate of Interest assumed in the valuation is too low, having regard to the rate that is realised by the Offices.

It may be interesting to dwell at some length upon these two points.

We are told that we know as a fact that the Expectation of the existence of a Life Policy is less than the Expectation of life of the persons insured. This, of course, is true, although in this connection it may be pointed out that Policies remain in force for a longer period than is generally supposed. This will be evident from the following Table, which relates to Whole Life Assurances, and which is taken from a paper by Mr. George King (J.I.A., XXXVII., 464):—

Central Age at Entry.	Expectation.	
	Persons.	Policies.
20	42·80	24·038
25	39·09	24·663
30	35·11	23·914
35	31·25	22·262
40	27·74	20·565
45	24·04	18·497
50	20·44	16·509
55	17·61	14·411
60	14·30	12·293
65	12·07	10·137

It has, however, been argued that if the Law of Averages is of importance in the matter of mortality it ought also to be of importance in the matter of discontinuance, and that the Offices are unfair to the Policy-holders when they premise that each Policy issued is destined to run its course and become a claim.

Now, there is a certain amount of truth in this reasoning, and if the Offices choose to assume a certain rate of discontinuance in the calculation of their premiums it would, of course, be the case that the premiums would be reduced for the several classes of Insurance.

The subject would, however, be very complicated if only for the reason that a different rate of discontinuance would be necessary for the different classes of Insurance, and for the different Offices. For example, the rate of discontinuance is very much higher among Whole Life Assurances than among Endowment Assurances. Again, the rate of discontinuance might be expected to be lower in non-commission paying Offices than in commission paying Offices. The rate of discontinuance also varies with the age at entry and with the sum assured.

Suppose, however, that the Offices did apply the rate of discontinuance to reduce the premiums payable, it must naturally follow that the Policies to be issued would not be entitled to Surrender Value or to Paid-up Policy privileges, since the Offices in calculating the new rates have assumed that there would be certain persons withdrawing *in respect of whose Policies no benefit was to be payable.*

The question then arises whether it is safer for the Insurance Offices and fairer to the Lives Assured to ignore the rate of discontinuance in the calculation of the rates of premium and in the valuation of the liabilities, and to pay to these persons who are unable or unwilling to continue the premium payments an equitable Surrender Value or to grant a Paid-up Policy.

This is the point that is overlooked by those who advocate the use of a Table of Discontinuance as well as a Table of Mortality in the calculation of Premium Rates and in the valuation of liabilities. The Offices in their calculations take account of the rate of mortality and neglect the rate of discontinuance. In those cases, however, where it is necessary to discontinue the Policy, the Offices make an allowance to the Policy-holders of the Surrender Value of the Policy, or offer in lieu thereof a Paid-up Policy, *i.e.*, *the Policy-holders receive in some form the equivalent of what is left over out of their past premiums after allowing for the risk in respect of the Insurances.* Put shortly, the fact that the Insurance Offices grant Surrender Values and Paid-up Policies, in addition to meeting the Claims, is the reply to those persons who contend that the Offices are unfair when they provide in their calculations for the rate of mortality and ignore the rate of discontinuance.

The Surrender Value of a Life Policy under which the Sum Assured is payable certainly arises from the nature of the contract, and any scheme by which it is proposed to substitute for the Surrender Value a reduction in the premium payable is of theoretical rather than of practical interest.

It is obvious that, notwithstanding the new condition, the Policy has a Surrender Value after the Policy has been in force for some years, and if the Assurance Office which issued the Policy is not prepared to pay a Surrender Value some other Assurance Office or a Reversionary Company, or some one who is interested in Life Policies as an investment, will purchase the Policy.

Consider, by way of example, an Endowment Assurance which was issued some fifteen years ago, the Sum Assured under which is payable at the end of twenty years from the date of issue of the Policy or at the previous death of the Life Assured. Suppose that the Life Assured under this Policy were to apply to the Office for the Surrender Value of the Policy, would the Office refuse a Surrender Value for that which so obviously has a Surrender Value, apart from any condition that may attach to the Policy?

In the same way, if the Office is not to give a Surrender Value

it cannot give a Paid-up Policy, otherwise if a Surrender Value is refused by the Office a Paid-up Policy will be taken by the Assured. In this way the assumptions as affecting the calculations of the premiums and the working out of the liabilities will be set aside.

If the Office were in its calculations to take account of the operative life of the Policy it would require to be a condition that the Policy was to be in force only so long as the premiums were paid by the Life Assured, in which case the Policy could not be assigned.

Suppose, however, that the Offices did apply the rate of discontinuance to reduce the premium rates, it does not follow that the ordinary Reserves or the Accumulated Fund would be diminished. There is, indeed, little doubt that for Whole Life Assurances the ordinary Reserve would require to be increased, more especially after the lapse of a number of years. Consider for example the Reserve that is required at that date after which for all practical purposes the rate of discontinuance is zero. The value of the benefit is the same as before, since by hypothesis the Policy is to run its course and become a claim, and the value of the future premiums is diminished since the premium itself is diminished. If, then, the value of the benefit is the same and the value of the premiums is diminished, it follows that the difference, that is the Reserve or the Accumulated Fund, is increased.

It has also been contended that the Offices are holding in hand enormous sums which have been accumulated very largely from derelict Policies.

It will surely be admitted by those who are versed in Life Assurance :—

First, that the rate of “lapse” in the first-class Offices is not considerable. Moreover, the Offices recognise that it is not to their advantage to allow Policies to lapse, neither can it be held to be to the advantage of the Assured.

Second, that in those cases where it is necessary that the Premium payments be discontinued, the amount of the Surrender Value or the Paid-up Policy, as the case may be, is not only fair, but in many Offices is exceedingly liberal. Not only so, but in some of the Offices Surrender Values and Paid-up Policies are guaranteed from the outset and accrue after payment of two or three years’ premiums, and indeed in some cases after payment of the first year’s premium.

It is, therefore, clear that if the Office pays a Surrender Value it cannot at the same time accumulate the Reserve, since, of course, the Surrender Value is paid out of the Reserve, and when the Office gives a Paid-up Policy the Reserve for the Paid-up Policy is equivalent to the Reserve for the ordinary Policy, *i.e.*, the Reserve for the Paid-up Policy takes the place of the Reserve for the ordinary Policy.

In several of the Offices an arrangement is in force under which Policies which have acquired a Surrender Value of not less than one year's premium may be re-instated without Medical Examination at any time within, say, thirteen months from the date of lapse on payment of the premium or premiums in arrear with interest thereon from the due date or dates at the rate of 5 per cent. per annum. An alternative plan with some of the Offices is to advance the Premiums as these fall due on security of the Policy until the premiums lying over with interest amount to the then Surrender Value of the Policy. A still further alternative with some Offices is to give a Paid-up Policy in lieu of the lapsed Policy either at the date of lapse or at the end of a period of, say, thirteen months from the original date of lapse.

Now, in all of these cases it is necessary for the Office to keep the Policy on its books until the Policy becomes a Claim, or is surrendered, or until the Policy lapses by the expiry of the probationary period, or on account of the premiums advanced with interest being equal to the Surrender Value of the Policy, so that the Surrender Value of the Policy is no longer sufficient to maintain the Policy in force.

Even in these cases where the Policy does finally lapse the Offices are usually willing to allow the Policy to be re-instated within a certain period from the date of lapse subject to the Company being satisfied as to the continued good health of the Life Assured and on payment of the premium or premiums in arrear with interest.

The point is, that the Offices encourage the Assured to keep their Policies in force, and for these cases where the Assured are unable for the time being to keep their Policies in force, the Offices endeavour by means of these automatic arrangements to look after the interests of the Assured.

The Office at a Valuation must reserve for Policies that are in force by means of any of these arrangements and for Policies that are likely to be re-instated. It is not, however, the practice of the



Offices to make a further reserve under this head, since no further reserve is necessary.

If you examine the Form which is referred to under Heading No. 7 in Fourth Schedule (A.) of the Assurance Companies Act, 1909, you will find that at the periodical Investigation there is required of each Company and for each class of Assurance the value of the Sum Assured and Bonus and of the Net Yearly Premiums, also the Net Liability, which is the difference between the value of the Sum Assured and Bonus and of the Net Yearly Premiums. The total of this Net Liability for each class of Assurance less the Net Liability of the Re-assurances plus the Adjustments, if any, make up the Net Liability of the Office in respect of its Assurances.

Now, if the contention be correct that the Offices are holding in hand enormous sums which have been accumulated very largely from Lapsed Policies—sums which we are told that no combination of circumstances could ever render requisite or liable to be called upon—it is clear that these sums must be included either under the heading Adjustments or in the Surplus carried forward.

The Adjustments require to be separately specified in the Schedule, and it will be found that as a rule these sums are required by way of Reserve and are part of the Liability of the Office. This indeed is an argument that has been brought against the Schedule that certain items are included under the heading Adjustments which should more properly appear in the value of the Sum Assured and Bonus or in the value of the Net Yearly Premiums, or in both.

The Surplus carried forward is also required partly on account of contingencies, partly again as a reserve for future bonuses or a sum which is to be applied at future Investigations to strengthen the reserves.

From this it is clear that the Fund which is held by the Insurance Office is a living Reserve, *i.e.*, the Reserve is required to provide for the Liabilities of the Office, which Liabilities include, as has been said, a Reserve for the maintenance of Bonus Additions at a rate which should not be less than the existing rate.

To turn now to the rate of Interest used in Valuation.

The usual rate of Interest assumed in the Valuation of the Liabilities of an Insurance Office is 3 per cent., but there are

Offices that employ even  $2\frac{1}{2}$  per cent. in estimating their Liabilities. Do these rates of interest not appear to be altogether too low when regard is had to the rate of interest which is being realised at present, and are not the critics of Insurance Offices justified when they say that the Reserves of the Insurance Offices are really too strong and are quite unfair to the Policy-holders?

It is necessary here to remember that the great bulk of Life Assurance business is effected with Profits. In arriving at the Liabilities, therefore, we have to take account of three different factors: Sum Assured, existing Bonus, and future Bonus.

Now, as one Division of Profits succeeds another, the time when the Policy-monies will become payable draws nearer and the addition to the Policy of Bonus which will be payable with the Sum Assured involves an increasing cost to the Office. It is the practice in the great majority of Offices to make a reserve only for the Sum Assured and existing Bonus, but at such a rate of Interest that the Office will be able to earn the greater part of the future Bonus out of profit from Interest. The amount of this profit will increase with the duration of the Contract, and, as pointed out, this increase is necessary to provide the increasing cost of the successive allotments of Bonus.

A Company, therefore, which values at 3 per cent. Interest does not assume that it will only earn 3 per cent. during the subsistence of its Contracts. Rather, if investigation were made, it might be found that it is counting upon making 4 per cent., the difference between the apparent and the true rates of Interest being required to maintain the rate of Bonus which the Office is at present declaring.

Let us take an example. The sum of £553 13s. 7d. is received at the commencement of a quinquennium, being the present value of £1000 due at the end of twenty years, assuming Interest at the rate of 3 per cent.

If the Insurance Office realised Interest at the rate of 3 per cent. per annum the amount in hand at the end of five years is £641 17s. 3d. The Insurance Company realises Interest at the rate of 4 per cent. per annum, which means that the sum in hand at the end of five years is £673 12s. 8d. The surplus is £31 15s. 5d., which is very nearly sufficient to provide a bonus of £50 payable along with the Sum Assured at the end of fifteen years, being £1 per cent. per annum on £1000 for each of the five years.

Assuming the Office to declare a Bonus of £1 per cent. per annum, the sum that is held by way of Reserve at the end of five years, *i.e.*, at the beginning of the second quinquennium, is £673 19s. 2d., being the present value at 3 per cent. Interest of Sum Assured £1000 and Bonus £50 payable at the end of fifteen years.

Again, if the Office were to realise Interest at the rate of 3 per cent. per annum, the amount in hand at the end of the second period of five years is £781 6s. 0d. The actual sum in hand, assuming the Office to realise Interest at the rate of 4 per cent. per annum, is £819 19s. 5d. The Surplus is £38 13s. 5d., which is rather more than is required to provide a further Bonus of £50 payable along with the Sum Assured at the end of ten years, being £1 per cent. per annum on £1000 for each of the five years since the date of the previous Investigation. The Sum Assured is £1000 as before, and the Bonus additions to the end of ten years are £100. Similarly at the end of the third and fourth quinquennia.

It is sometimes contended by persons who hold Endowment Assurances that while they appreciate the reasons for an Office assuming a low rate of Interest in the valuation of its Whole Life Assurances and of its Endowment Assurances that have still a long term to run, they do not understand how there can be any cogent reason for the Office valuing, say, at 3 per cent. Interest these Endowment Assurances that mature, for example, during the quinquennium following the date of Valuation, when as a fact the Office is realising 4 per cent. Interest, and is certain, so far as anything can be certain, to realise that rate of Interest during the currency of their contracts.

The reason is that the Office for these contracts, just as for the rest of the contracts, is reserving for the Sum Assured and the existing Bonus and is leaving out of account the Intermediate Bonus which will fall to be added to the Sum Assured and existing Bonus at the maturity of these Policies or at the previous death of the Lives Assured.

Suppose, for example, that the Sum Assured for a particular Policy is £1000, and that the existing Bonus is £150, also that the Sum Assured and Bonus are due at the end of five years certain with an Intermediate Bonus for each of the five years at the rate of £1 per cent. on £1000. If the Office values at 3 per cent. the Sum Assured and existing Bonus, the Reserve is £992,

which does not greatly differ from the present value at 4 per cent. Interest of the Sum Assured, the existing Bonus, and the Intermediate Bonus. In other words, although the Office is valuing at 3 per cent. it will require to realise Interest at the rate of 4 per cent. in order to meet the contract in full at its maturity.

The point is that an Insurance Office which is anxious to maintain its present rate of Reversionary Bonus must either make a Reserve for the Sum Assured, the existing Bonus, *and the future Bonus* at the rate which is at present declared, in which case the rate of Interest assumed may be the rate of Interest which the Office expects to realise during the continuance of the contracts, or, if a Reserve be made for the Sum Assured and the existing Bonus alone, then the Valuation must be made at such a rate of Interest that the future Bonus will, for the most part, be realised out of profit from Interest.

It has been ascertained by investigation that a margin of  $\frac{1}{2}$  to  $\frac{3}{4}$  per cent. above the Valuation rate of Interest is required to maintain a Simple Reversionary Bonus of 30s. per cent. per annum, while for Compound Bonus, Policies *even an Interest margin of 1 per cent. is barely sufficient*, more especially for Whole Life Assurances. A Compound Bonus Office anxious to maintain a 30s. Bonus will, indeed, require to make a considerable amount of Surplus from other sources before it can be satisfied with an Interest margin of 1 per cent.

It is of the greatest importance that a Life Office should realise a good rate of Interest consistent with security. A well-known Actuary has expressed himself upon this point as follows:—"It may serve to indicate the great importance of obtaining a good return on the investments if it is realised that one per cent. of increased interest on the funds of a Company will, on an average, have as great an effect as a saving in expenditure equal to 10 per cent. on the premium income, while if an Office could count on realising 5 per cent. interest in place of 3 per cent. it might reduce its premiums some 30 per cent. or double its bonuses."

It is obvious that the percentages will vary for each Company, and will depend entirely on the relation as between the Assurance Fund and the Premium Income.

Take for example the case of a Company where the Assurance Fund is £100,000. One per cent. of increased Interest is £1000, which is the assumed saving in expenditure. The percentage that

the saving in the expenditure bears to the Premium Income is as follows :—

Premium Income.	Number of Years Premium Income in hand.	Saving Per Cent.
£5,000	20	20
6,000	16·7	16·7
7,000	14·3	14·3
8,000	12·5	12·5
9,000	11·1	11·1
10,000	10	10
12,500	8	8
15,000	6·7	6·7
17,500	5·7	5·7
20,000	5	5

If the Office is realising 5 per cent. in place of 3 per cent. the additional Interest is £2000. The reduction in premiums would be as follows :—

Premium Income.	Reduction, Per Cent.
£5,000	40
6,000	33·3
7,000	28·6
8,000	25
9,000	22·2
10,000	20
12,500	16
15,000	13·3
17,500	11·4
20,000	10

Taking the returns of the Life Companies of the United Kingdom for year 1910, it will be found that the Mean Fund is £377,228,464 and the premiums £43,529,275, the number of years' Premium Income in hand being 8·7. One per cent. of



increased Interest is £3,772,285, which is equal to 8·7 per cent. on the Premium Income. Two per cent. of additional Interest is £7,544,569, which is 17·3 per cent. of the Premium Income.

The estimates would appear to be correct in the case of a Company which has ten years' Premium Income in hand in the case of the reduction in the Expenses, and fifteen years' Premium Income in hand in the case of the reduction in the premiums. It must be admitted that there are not many Companies that have fifteen years' Premium Income in hand.

In passing, it may be pointed out that the lower the rate of Interest that is used in the Valuation the higher the net premiums, and as a consequence the lower is the percentage of the Office premiums that is reserved for Expenses and Profits.

The consequence is that, in the case of those Offices which use a low rate of Interest, the percentage of the premiums that is absorbed in Expenses may exceed the percentage of the premiums that is reserved for Expenses and Profits, which means that the balance of the Expenses of the Office must be met out of the Profit from other sources. This point has to be kept in view in comparing the rate of Interest that is assumed in the Valuation with the rate of Interest earned.

Certain Offices which assume a low rate of Interest make use of special net premiums in the Valuation in order to increase the percentage of the Office Premiums that is reserved for Expenses and Profits. This means that these Offices are not only making a considerable profit from Interest, but are providing at the same time for a profit from Loading.

Certain other Offices use what might be called the Modified Net Premium method of Valuation. Those Offices use the Net Premium method, but when the Net Premium exceeds the Office Premium less a certain percentage, the Premium that is taken credit for in the Valuation is the Office Premium less the percentage. In this way the Office increases the percentage of the Premiums that is reserved for Expenses and Profits, and makes stronger still the stringency of the Net Premium method.

It is sometimes assumed that because a certain Experience shows higher rates of mortality than another it must of necessity show higher Reserves.

That the assumption is based on false premises will be evident

from a consideration of the Tables in this paper, which show how the Reserves are arrived at.

If the rate of mortality is increased, the rate of premium is increased. On the other hand, there will be fewer survivors to pay the premiums, and there will be more claims to meet out of the premiums, also the Fund in hand will fall to be apportioned among a less number of survivors. Again, if the rate of mortality is decreased, the premium is decreased. On the other hand, there are more survivors to pay the premiums, and there will be fewer claims, also the Fund in hand will fall to be apportioned among a greater number of survivors. The point is that it is impossible, merely from a consideration of the rate of mortality, to say whether or not the Reserves will be greater or less by any one Table than by another.

Not only so, but when we compare the Reserves by one Table of Mortality with those by another, we frequently find that for certain ages at entry and terms the Values by the one Table are greater than by the other, while for certain other ages at entry and terms the position is reversed ; also that for certain classes of Assurance the one Table gives greater Reserves than the other, while for certain other classes the position is reversed. We see this exemplified in the  $H^M$  and  $O^M$  Tables. While the  $O^M$  Table gives increased Reserves for Whole Life Assurances at the younger ages at entry it gives diminished Reserves for those at the older ages at entry.

It is difficult to say how the Reserve by the  $O^M$  Table for any single Office will compare with the corresponding Reserve by the  $H^M$  Table. It may, however, be stated that in an average Office and for Whole Life Assurances Without Profits the Reserve by the  $O^M$  Table is greater than by the  $H^M$  Table, the difference calculated as a percentage on the  $O^M$  Reserve decreasing as the age of the Office increases. For example, it has been found that in the case of an average Office which has been established for twenty years, for every £9,816 of Reserve that is required by the  $H^M$  Table at 3 per cent. interest, £10,000 of Reserve is required by the  $O^M$  Table, while in the case of an average Office which has been established for fifty years the figures are £9,906 and £10,000 respectively.

The Reserve for Whole Life Assurances Without Profits by the  $O^M$  and  $O^{M(5)}$  Tables is less in an average Office than the Reserve by the  $H^M$  and  $H^{M(5)}$  Tables, but approaches to the Reserve by

the  $H^M$  and  $H^{M(5)}$  Tables as the age of the Office increases. For example, it has been found that in the case of an average Office which has been established for twenty years, for every £10,060 of Reserve that is required by the  $H^M$  and  $H^{M(5)}$  Tables, at 3 per cent. Interest, £10,000 of Reserve is required by the  $O^M$  and  $O^{M(5)}$  Tables, while in the case of an average Office which has been established for fifty years the figures are £10,035 and £10,000 respectively.

In the case of Endowment Assurances Without Profits the same principle holds good as regards the Reserves by the  $H^M$  Table and the  $O^M$  Table, *i.e.*, the Reserve by the  $O^M$  Table is greater than by the  $H^M$  Table, the difference between the Reserves calculated as a percentage on the  $O^M$  Reserve decreasing as the age of the Office increases. For example, it has been found that, in the case of an average Office which has been established for twenty years, for every £9,906 of Reserve that is required by the  $H^M$  Table, at 3 per cent. Interest, £10,000 of Reserve is required by the  $O^M$  Table, while in the case of an average Office which has been established for forty years the figures are £9,920 and £10,000 respectively.

The Reserve for Endowment Assurances Without Profits by the  $O^M$  and  $O^{M(5)}$  Tables is greater throughout than that by the  $H^M$  and  $H^{M(5)}$  Tables. The difference between the Reserves calculated as a percentage on the  $O^M$  and  $O^{M(5)}$  Reserve decreases as the age of the Office increases. For example, it has been found that in the case of an average Office which has been established for twenty years, for every £9,927 of Reserve that is required by the  $H^M$  and  $H^{M(5)}$  Tables, at 3 per cent. Interest, £10,000 of Reserve is required by the  $O^M$  and  $O^{M(5)}$  Tables, while in the case of an average Office which has been established for forty years the figures are £9,935 and £10,000 respectively.

It is curious that each succeeding Mortality Table that has been issued by the British Life Offices requires the Offices to hold greater and still greater Reserves. The Seventeen Offices' Table, which was published in 1843, requires very low Reserves as compared with the  $H^M$  Table which was published in 1869, while, as has been seen, the  $O^M$  Table which was published in 1903 requires in an average Office greater Reserves than those by the  $H^M$  Table. The point is of importance if only for the reason that each Mortality Table that is published is out of date at the time of publication—the British Life Offices Tables (1863-1893) were not

published until 1903—and already the Reserves that are required by the Offices may be greater than according to the O<sup>M</sup> Table.

It has been said that for any individual Office it is impossible to say how the Reserves by the O<sup>M</sup> Table will compare with the Reserves by the H<sup>M</sup> Table.

There are, however, certain Offices that employ what is called the Gross Premium method of Valuation. This means that the value of the Sum Assured and the Annuity that is used in valuing the premiums are computed by a certain Mortality Table, while the premiums that are taken credit for in the Valuation are a percentage of the Gross, *i.e.*, the Office Premiums payable.

If such an Office alter its basis of Valuation from the H<sup>M</sup> to the O<sup>M</sup> Table, the Reserves will be diminished for the following reason. The value of the Reversion is less by the O<sup>M</sup> Table than by the H<sup>M</sup> Table since the rates of mortality by the O<sup>M</sup> Table are lighter than by the H<sup>M</sup> Table, also the value of the Annuity is greater by the O<sup>M</sup> Table than by the H<sup>M</sup> Table for the same reason. If then, the Office employ the O<sup>M</sup> Table, it means that the value of the Sum Assured is less than if it employed the H<sup>M</sup> Table, also the value of the future premiums is greater. The result is that the Reserve is less by the O<sup>M</sup> than by the H<sup>M</sup> Table. Not only so, but the value of the Existing Bonus and the cost of the New Bonus are less by the O<sup>M</sup> Table than by the H<sup>M</sup> Table.

The important point to notice is that according to the Gross Premium method of Valuation the premiums used in the Valuation are the same by the two Tables since the premiums taken credit for are by hypothesis the same percentage of the Office Premiums payable.

If, on the other hand, the premiums valued are the O<sup>M</sup> premiums instead of the H<sup>M</sup> premiums, the O<sup>M</sup> premiums are less than the H<sup>M</sup> premiums, and it will be evident that without further investigation it is impossible to say how the Reserve for the particular Office by the O<sup>M</sup> Table will compare with the Reserve by the H<sup>M</sup> Table.

The ordinary method of Valuation makes no allowance for the fact that the cost of getting New Business is many times greater than the cost of retaining the existing business. The result is that some Offices increase the net premiums that are taken credit for in the Valuation by such a sum as is supposed to represent the annual equivalent of the extra cost of the New Business. This, of course, means a reduction in the Reserve that is

required by the ordinary net premium method of Valuation since the premiums that are taken credit for are greater than the ordinary net premiums.

Some of the Offices, with a view to increasing the Reserves, use at the periodical Investigations a combination of Mortality Tables, say, the  $O^M$  and  $O^{M(5)}$  Tables. This means that the Office at the Valuation is taking credit for net premiums computed by the  $O^M$  Table, but while the rate of mortality that is assumed for Lives that have been less than five years upon the Books is the  $O^M$  Table, the rate of mortality that is assumed for the Lives that have been five or more than five years upon the Books is the  $O^{M(5)}$  Table which is based on the Mortality Experience of Lives Assured that have been five or more than five years upon the Books, *i.e.*, in working out the rate of Mortality in the  $O^{M(5)}$  Table, that portion of the Experience has been omitted which deals with recently examined Lives. It follows that the rates of mortality in the  $O^{M(5)}$  Table are high as compared with the rates of mortality in the  $O^M$  Table.

The result is that a Valuation by the  $O^M$  and  $O^{M(5)}$  Tables is more stringent than a Valuation by the  $O^M$  Table. For example, it has been found that in the case of an average Office which has been established for twenty years, for every £10,000 of Reserve that is required by the  $O^M$  Table at 3 per cent. Interest, £10,166 of Reserve is required by the  $O^M$  and  $O^{M(5)}$  Tables, while in the case of an average Office which has been established for fifty years, the figures are £10,000, and £10,071 respectively. These figures relate to Whole Life Assurances Without Profits.

The Reserves for the existing Bonus either for Whole Life or for Endowment Assurances according to the Table used, beginning with the greatest, are as follows :—

- (1)  $H^{M(5)}$ ; (2)  $H^M$ ; (3)  $O^{M(5)}$ ; (4)  $O^M$ .

Similarly as regards the cost of the New Bonus.

It occasionally happens that an Office has been fortunate during a quinquennium. The actual rate of mortality is very much less than the expected, the rate of Interest earned is exceptionally high and is accounted for to some extent by profit on Reversions, also the profit on the Annuity Business and on the Non-participating business is considerable. There is perhaps a temptation to make use of the whole of the Surplus or nearly the whole of the Surplus to increase the rate of Bonus.



When declaring a rate of Bonus it is important to keep in view :—

First, the sources from which the Surplus has arisen. If these sources were of a fluctuating nature it might follow, doubtless would follow, from the theory of averages, that the amount of profit for the present quinquennium or for the succeeding quinquennia will be less and perhaps substantially less than for the past quinquennium ; and

Second, if the rate of Bonus be increased the Liabilities of the Company are increased not only by the value of the increase in the rate of Bonus which is to be given as a result of the present Investigation, but also by the value of the increased Bonus which will also fall to be given at the future Investigations. If, for example, the rate of Bonus be 30s. per cent. and it is proposed to increase the rate of Bonus to 35s. per cent., the Actuary must be satisfied that the Bonus earning power of the Company is sufficient to maintain the rate of Bonus at 35s. per cent. The point is that the Bonus earning power of the Company may only be sufficient to maintain a Bonus of 30s. per cent. and the Surplus in hand at the present Investigation may be sufficient to declare a bonus of 35s. per cent. If, then, the Company declare a Bonus of 35s. per cent., it follows that the Company is declaring the increase in the rate of Bonus to some extent out of Reserves instead of out of Surplus, and that it is not at all certain that the Company will be able to maintain the Bonus of 35s. per cent. at the future Investigations.

Apart from the question of Reserves against Liabilities, it is necessary to accumulate a substantial reserve against the depreciation of Investments.

It matters not how careful a Company may be in the selection of its Investments, there is always the possibility of the Office having to face a depreciation at a quinquennial Valuation, and if we keep in view that the majority of the Insurance Companies close their books on the 31st December, which is a period of the year when financial stringency is at its tightest, we can easily realise how in Investments of the very highest character the possibility of depreciation is always present. We can also appreciate the likelihood of such a depreciation being concentrated in a single quinquennium with disastrous results to the available profits for distribution.

The accumulation of an Investment Reserve is, therefore, a necessity to counteract the certain effect of Market fluctuations,

and the existence of such a Reserve will do much to steady and to ensure a continuance of the rate of Bonus declared.

To turn to Annuities. Table V. shows how the Reserves work out for this class of business.

The important point in connection with this Table is that unless the actual experience of the Annuitants works out as per the expected according to the Table of Mortality, the Reserve that is required at the end of the year to provide the future payments to the Survivors will be greater or less than the Fund in hand at the end of the year according as the actual mortality is less than or greater than the expected.

To make the meaning clear. The Fund in hand at the end of the first year, if the actual Mortality corresponds with the expected, is £716,414. The Survivors to the end of the year are 61,143, and the average Reserve is therefore £11 14s. 4d. If, then, the number dying during the first year were 478 instead of 578, the Survivors to the end of the year would be 61,243, and since the average Reserve for each of these Survivors is £11 14s. 4d., the Reserve required is £717,586 instead of £716,414, representing a loss for the year of £1,172.

The point, as has been said, is of importance. It happens, for example, that an Annuitant dies during the first year before even one payment of the Annuity has been made. An application is put forward by the representatives of the Annuitant for a return of a portion of the Purchase Money since the Office has clearly made an extravagant "profit" out of the transaction. Does it not appear to be reasonable that the Office should make such a refund? The Office cannot agree to the request for the reason that unless a certain number die during the early years the Office would not be in the position to make the Annuity payments to those who live beyond the expectation of Life. It would be just as reasonable that the Office should have it in its power to cease the Annuity payments in the case of those persons who live to extreme age. Put shortly, Annuity business is only possible if the terms of the Contract are adhered to in every instance.

It is interesting to notice that the Mortality Experience of Annuitants is improving, that is to say, the actual mortality of the Annuitants is less than the expected. In Table VI. a comparison is shown of the value of Annuities according to the

TABLE V.  
ANNUITIES.

Year. (1)	Fund at Commencement of Year. (2)	Interest Earned in Year. (3)	Sum of (2) and (3). (4)	Annuities Payable. (5)	Fund at End of Year. (6)
1	£754,910	£22,647	£777,557	£61,143	£716,414
2	716,414	21,492	737,906	60,273	677,633
3	677,633	20,329	697,962	59,127	638,835
4	638,835	19,165	658,000	57,751	600,249
5	600,249	18,007	618,256	56,217	562,039
6	562,039	16,861	578,900	54,587	524,313
7	524,313	15,729	540,042	52,884	487,158
8	487,158	14,615	501,773	51,101	450,672
9	450,672	13,520	464,192	49,229	414,963
10	414,963	12,449	427,412	47,264	380,148
etc.	etc.	etc.	etc.	etc.	etc.

This Table is intended to show what might be called the Finance of Annuity Business.  
The figures relate to 61,721 Annuities taken out at age 60 last birthday, the Annuity being £1 payable yearly, and the purchase price £12 4s. 8d.

TABLE VI.

Comparison of Annuity Values at 3 per cent. Interest according to the New Government Table and the Old Government Table.

MALES.				FEMALES.		
Age.	Value of an Annuity of 1.			Value of an Annuity of 1.		
	New Government Table. (2)	Old Government Table. (3)	Column (2) minus Column (3) (4)	New Government Table. (5)	Old Government Table. (6)	Column (5) minus Column (6) (7)
(1)						
40	17.34	16.38	+ .96	18.69	18.18	+ .51
45	15.85	15.15	+ .70	17.31	16.82	+ .49
50	14.24	13.81	+ .43	15.78	15.27	+ .51
55	12.55	12.31	+ .24	14.09	13.61	+ .48
60	10.82	10.60	+ .22	12.29	11.79	+ .50
65	9.10	8.90	+ .20	10.43	9.91	+ .52
70	7.45	7.30	+ .15	8.59	8.00	+ .59
75	5.93	5.81	+ .12	6.84	6.37	+ .47
80	4.59	4.55	+ .04	5.27	4.94	+ .33

experience of the Government Life Annuitants from 1875 to 1904 (termed the New Government Table), and the corresponding values of Annuities based upon the experience from 1808 to 1875 (termed the Old Government Table).

It will be noticed that the Old Government Table underestimates considerably the vitality of Annuitants.

In Table VII. a further comparison is shown of the values of Annuities according to the New Government Table with the corresponding values of the Annuity Tables published in 1903, which were based upon the British Offices Experience.

It will be seen from the differences in Column (4) that the Annuity Values on male lives are in close agreement for ages above 55.

In the case of female lives the new Values are, however, in excess of those based upon the British Offices Experience, the largest differences occurring at the beginning and near the end of the Table.

It is important to notice that in the case of Females the Annuity Value at 3 per cent. interest by the New Government Table is approximately equal to the value by the British Offices Life Annuity Tables, 1893, at the following rates of interest:—

<i>Age.</i>	<i>Rate of Interest.</i>
65	$2\frac{7}{8}$ per cent.
70	Slightly less than $2\frac{3}{4}$ per cent.
75	$2\frac{3}{8}$ per cent.
80	$2\frac{1}{4}$ per cent.

These statistics are of importance to the Life Offices, since it must be kept in view that Life Office Annuitants may be said to relate to a better standard of Life than is represented by the statistics of the New Government Experience, partly in view of the fact that the selection against the Life Offices is greater than against the Government—a considerable number of annuities are purchased at the National Debt Office under Wills and otherwise, where the Annuitants do not exercise any option—and partly for the reason that the average amount of Annuity is greater in the Life Offices than in the Government, and, as a consequence, the Life Office Annuitants are better able to take care of themselves, and to adjust their place of residence to the state of their health.

These Tables demonstrate very clearly the necessity for Reserves in Annuity Business. The point should not be lost sight of in



TABLE VII.

Comparison of Annuity Values at 3 per cent. Interest according to the New Government Table, and according to the British Offices Annuity Tables.

Age.	MALES.			FEMALES.		
	Value of an Annuity of 1.		Column (2) minus Column (3) (4)	Value of an Annuity of 1.		Column (5) minus Column (6) (7)
	New Government Table. (2)	British Offices Annuity Table. (3)		New Government Table. (5)	British Offices Annuity Table. (6)	
(1)						
40	17.34	17.60	— .26	18.69	18.26	+ .43
45	15.85	16.06	— .21	17.31	16.93	+ .38
50	14.24	14.40	— .16	15.78	15.51	+ .27
55	12.55	12.66	— .11	14.09	13.96	+ .13
60	10.82	10.88	— .06	12.29	12.23	+ .06
65	9.10	9.12	— .02	10.43	10.33	+ .10
70	7.45	7.44	+ .01	8.59	8.41	+ .18
75	5.93	5.90	+ .03	6.84	6.61	+ .23
80	4.59	4.54	+ .05	5.27	5.05	+ .22

connection with Annuity Business, not only that each Mortality Table issued shows a decreasing mortality, but that each Mortality Table when it is issued is out of date. The British Offices Life Annuity Tables, which embrace the period from 1863 to 1893, were published in 1903, and showed very clearly that the Investigation into the Experience of Government Annuitants, which extends over the period from 1808 to 1875, was obsolete and misleading. The latest Investigation into the Experience of Government Annuitants, which covers the period from 1875 to 1904, was published in 1912, and shows clearly that the British Offices Life Annuity Tables, 1893, no longer represent the Experience of Annuitants. The rates of Annuity and the Reserves for Annuity Business must obviously be based on the Experience of the past. It is, however, necessary to keep in view that, as has been said, the mortality of Life Office Annuitants is certain to be lighter in the future than in the past. This is clearly shown in the following Table, which is taken from the Report of the Actuary of the National Debt Office, dated the 12th day of October, 1910:—

Sex.	Actual Deaths.	Expected by Government Ex- perience, 1808-1875.	Expected by British Offices Table, 1863-1893.
Females,	9,333	10,080	9,493
Males,	4,169	4,245	4,145

This means that—to take the case of females—if an Office had assumed that the Mortality Experience during the years 1875 to 1904 would be according to the Government Experience 1808 to 1875, the deaths expected would have been 10,080, while the actual deaths were only 9,333. Even if the Office had assumed that the Mortality Experience would be according to the British Offices Life Annuity Tables, 1893, the deaths expected would be 9,493, while the actual deaths were only 9,333. In the case of the males, while the rate of mortality is very much lighter during the period 1875 to 1904 than according to the 1808 to 1875 Experience of the Government Annuitants, there is no great difference between the 1875 to 1904 Experience and the British Offices Life Annuity Experience 1863-1893.

It is evident that the Reserves of the Offices will require to be strengthened to provide for the increased vitality of Annuitants, more especially in the case of females.

It is interesting to compare the Values of an Annuity according to—

First, the British Offices Experience, 1893 (Whole Life participating Assurants, Male Lives).

Second, the British Offices Experience, 1893 (Whole Life non-participating Assurants, Male Lives).

Third, the British Offices Experience, 1893 (Annuitants, Males).

This is attempted in Table VIII. It will be noticed that the Annuitants are not so good lives as the Whole Life participating Assurants, but that they are better lives than the Whole Life non-participating Assurants, notwithstanding the fact that the Assurants were accepted by the Offices as first-class lives, and only after a stringent Medical Examination, while, of course, the Annuitants were self-selected. This Table demonstrates very clearly the force of the selection that is exercised by Annuitants.

TABLE VIII.

Comparison of Annuity Values at 3 per cent. Interest, according to the Experience of Whole Life Assurants and Annuitants (Male Lives).

Value of an Annuity of One.

Age.	Assurants.		Annuitants.
	Participating.	Non-participating.	
40	17·623	17·102	17·604
45	16·087	15·553	16·061
50	14·441	13·887	14·403
55	12·718	12·141	12·660
60	10·966	10·363	10·882
65	9·239	8·615	9·121
70	7·594	6·959	7·441
75	6·079	5·452	5·898

Before leaving the subject of Annuity Business, it might be as well to point out that several of the Offices are offering increased rates of Annuity per cent. to under-average Annuitants,

which practice was almost unknown at the date of the Institute Faculty Investigation (1863-1893).

The result of this practice will be to create a specially select class of Annuitants in the ordinary group, and it may be taken for granted that if only for this reason the rate of Mortality in the future among the ordinary group of Life Office Annuitants will be lighter than in the past.

There is another point. In any future Investigation into the Annuity Business of the Life Offices, it will be necessary to differentiate as between the ordinary and the under-average groups.

It may be of interest to say a few words on the vexed question of Surrender Values.

It sometimes happens that the Assured is dissatisfied with the amount of the Surrender Value that is quoted by the Office. He has compared the Surrender Value with the premiums paid, and he finds that the Office is retaining what in his opinion is an unfair proportion of the premiums. It has on occasions been claimed by the Assured that in fairness he is entitled to the return of the whole of the premiums paid, with an allowance for the Interest that has been earned by the Office.

The difficulty, or rather the misapprehension, arises from a mistaken idea of the theory of Life Assurance.

What is a Surrender Value? It arises from the nature of the Contract. If the Office received from year to year the equivalent of the Insurance risk there would be no Surrender Value. The Office does, however, receive in the case of a Whole Life Assurance a uniform premium, which premium is too great during the early years and is too small thereafter. If, then, the risk is an increasing one, while the premium is uniform, there is bound to be a sum in the funds of the Office, the major portion of which sum may be returned to the Assured in event of the discontinuance of the Contract.

The point, however, is that the Office has incurred a certain amount of risk, and this risk must be paid for out of the premiums received.

It is sometimes contended by the Life Assured who is surrendering that *he* has not died, and that for this reason *he* should not be called upon to pay for a risk which has not happened in his case. The reply to this is—

First, Life Assurance is only possible on the principle of co-operation. The Actuary is able to tell almost exactly the number of persons who will die during each year out of a certain number of Lives Assured. The Actuary is not able to name the individuals who will die during the year. The understanding at the outset is that all are to receive the same Sum Assured irrespective of the duration of Life. Life Assurance is indeed an Agreement that those whose good fortune it may be to live beyond their expectation of Life are to resign the surplus in favour of those who die early. If, then, a person is fortunate enough to survive, he is not entitled to go back on the Agreement and to hold that as he has survived he is to be placed in the same position as he was at the outset of the Insurance Contract, and to claim the repayment of the premiums paid, with Interest. Consider, by way of further illustration, the case of Fire Insurance. Just as in Fire Insurance, the risk from year to year must be met out of the premiums, not only of those who are compelled to claim under their Policies, but of those who have been more fortunate, so in Life Assurance the risk must be met out of the premiums that are paid, not only by those who die, but by those who survive; and

Second, suppose that the Policy is not surrendered, and the Life Assured were to die during the following year. Would the Representatives of the Life Assured agree in this case to accept in full discharge the premiums paid with Interest if this sum were less than the Sum Assured? Would any Office dare to put forward such a request?

It has been remarked in these notes that the Office should return the major portion of the Reserve. It has, however, been contended that the Office should return the whole of the Reserve, since, as it is put, the Reserve constitutes the sum which the Office has accumulated on behalf of the Life Assured. This, however, would as a rule be impossible for at least two reasons—

First, the selection is against the Office, *i.e.*, it is only possible for the Assured to surrender a Life Policy. The Office is not allowed to approach an Assured and to insist that the Policy which he holds must be surrendered. If the Office had such a power it is reasonable to assume that it would endeavour to get rid of the worst of its risks. As the power is with the Assured and the Assured alone, it is reasonable to assume that generally speaking only these Policies will be surrendered where the Lives Assured are first-class lives, *i.e.*, it is not likely that a Policy will be surrendered or will be allowed to be surrendered if the Life is not in good health. The



Reserve under a Policy is the average Reserve; it is not in any case the sum which is at the credit of an individual Policy. The Actuary reserves for the risks as a whole; and Second, the ratio of expenditure of the Office will to a certain extent be increased by the withdrawal of the Life Assured, and it is only fair to the Office that, as the Contract is being broken by the Assured and not by the Office, this point should be considered in working out the Surrender Value.

By way of example, let us suppose that an important Borrower, say, a Trust Company comes into the market for a five years' Loan, offering 4 per cent. Interest for the accommodation. The Contract is a two-sided one. On the one hand, the Borrower undertakes to pay a certain rate of Interest for a fixed period of years, and on the other, the Lender contracts to lend his money for the fixed period of years on the terms arranged.

It would be quite unreasonable for the Lender to present his note of obligation at any time within the period and demand its repayment, for two reasons—

- First, the Borrowing Company has contracted to pay a certain rate of Interest on the assumption that it would have the use of the money for the agreed upon term; and
- Second, the Borrowing Company has contracted to repay the sum borrowed at the end of a fixed term and has arranged its financial operations accordingly.

The Contract is an equitable one, but only fair to the Borrower if the terms of the Loan are rigidly adhered to.

The analogy between the case cited and a Contract of Life Assurance is complete. The understanding is that the Life Assurance is to endure for a fixed period (either the term of the Assurance or the lifetime of the Life Assured) and to break the Contract at the option of the Assured is to involve the Company in financial loss, and the Assured is not entitled to the same favourable treatment as if he had kept the Contract in force until its maturity. The measure of this loss can be accurately gauged, and in estimating the amount the Company must give due weight to the several factors.

The rules of the Offices vary materially in the matter of Surrender Values. Some Offices allow Surrender Values even after payment of one year's premium, while in other Offices, indeed, in most Offices, a Surrender Value is only allowed after payment of three years' premiums. Some Offices give Guaranteed

Surrender Values, whereas in most Offices the Surrender Value depends on the principles that may be in force at the time that the Surrender Value is applied for. Some Offices give large Surrender Values, while other Offices do not encourage Surrenders. Some Offices, indeed, have Special Schemes under which a very small Surrender Value is allowed, or a Surrender Value is only allowed after payment of, say, five years' premiums.

It is difficult to give a rule for the calculation of Surrender Values since, of course, each Office is a law unto itself. In Table IX. is given the proportion of the premiums paid that is returned by one of the first-class Offices under its With Profit Policies for age at entry 30. This Table is intended to be read in conjunction with the previous remarks, and is given only to prove that Offices generally are fair and even liberal to their Assured in the matter of Surrender Values.

TABLE IX.

*SURRENDER VALUES.*

TABLE showing the ratio per cent. which the Surrender Value of a Policy with Profits bears to the total premiums paid.

Age at entry 30 next birthday.

End of Year.	Ordinary Whole Life.	Whole Life, 20 Payments.	Endowment Assurance, 20 Years.
2	26	44	55
3	36	48	59
4	41	50	62
5	45	52	65
6	49	53	68
7	50	55	71
8	52	57	74
9	54	59	77
10	55	61	81
11	57	62	84
12	58	64	88
13	60	66	91
14	61	68	95
15	62	70	99
16	64	71	104
17	65	73	108
18	66	75	113
19	68	77	118
20	69	86	—

There are certain kinds of Policies that are not entitled to a Surrender Value, as, for example, Pure Endowments without return of premium. Under such a Policy, the Sum Assured is payable only in case the Life Assured survives to the end of the term, *i.e.*, the Life Assured must survive to win. If then, the Life Assured were likely to die during the term, it would, of course, be to his advantage to surrender the Policy. The point, however, is (*see* Table III.) that if the Office is to be in the position to meet the Sums Assured in the case of those who survive to the end of the term it must accumulate, as has been previously indicated, the premiums not only of those who survive to the end of the term, but the premiums of those who have died during the term, *i.e.*, the premiums of those who survive will not by themselves provide for the Sums Assured. If the Life Assured be unable or unwilling to continue the premium payments, the Office would no doubt be willing, after a certain number of years' premiums have been paid, to allow a Paid-up Policy.

The Bonuses as a rule are added to and are payable along with the Sum Assured. It is, however, sometimes assumed by the Assured that these Reversionary Bonuses are payable *in full* at the date of the proposed Surrender. The point is that Bonus Additions constitute a debt which is payable at the death of the Life Assured or at the maturity of the Insurance, assuming, of course, that the Policy is continued in force until that date. If then, the debt is only payable after the lapse of a number of years, it is impossible to pay the debt in full before it is due. If an immediate payment is required the Bonus must be reduced to an amount depending on the age of the Life Assured and the class of Policy.

That the subject of Life Assurance is of importance is evident from the fact that the Life Assurance Funds of the Ordinary Life Companies established in the United Kingdom are no less than £348,545,470, and that the Assurances in force of the Ordinary Life Companies established in the United Kingdom as shown by the last Valuation Returns are 2,863,851 Policies for Sums Assured £800,215,506. These are big figures taken by themselves, but when these are compared with the Insurable Population it will be found that the results that have been hitherto achieved by the Insurance Offices are to some extent disappointing and that much has yet to be accomplished by the

Assurance Offices in order to bring home to the Insurable Population the advantages of Life Assurance not only as a provision but as a means of Investment.

To enable us to explain the business of Life Assurance it is necessary that we should understand not only the different Schemes of the Offices but the business *per se*, and one of the most important conditions of the Business of Life Assurance is the necessity of Accumulated Funds.

# THE PRINCIPLES OF LIGHTNING AND OF LIGHTNING RODS.

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CONSULTING the report of the Inspector of Insurance for the Province of Ontario, it is found that of all the claims paid for losses by fire in Ontario during the years 1900-1909 inclusive, the loss due to lightning was \$1,366,826, which is 12.5 per cent. of all losses paid during that time, including cities and towns (and thereby the great Toronto fire), as well as the country. Since risks are not taken at full value, and since numerous buildings are burned which are not insured at all, it would probably be a safe estimate that the actual loss on buildings due to lightning during the above period is probably \$2,500,000 or more. Besides this there is the immense loss in live stock caused by lightning, which would probably be as much more, making \$5,000,000 in all.

When farm buildings only are considered, the percentage of loss caused by lightning is much greater than  $12\frac{1}{2}$  per cent. During the summer of 1911 the Department of Physics at the Ontario Agricultural College, with a view to securing information upon the subject, sent letters of inquiry to one hundred and thirty-eight Insurance Companies doing business in Ontario. Quite a number of these do not insure farm buildings at all, and from some others the information obtained was not in a form that could be tabulated. However, forty of the Companies who replied were definite in their reports, and from these reports we find that of all the rural house claims settled by the forty Companies during an average period of  $12\frac{1}{2}$  years, 26.8 per cent. were due to lightning. Of all the barn claims settled during the same period, 66.25 per cent. were due to



lightning. Including both barns and houses, it was found that of all rural claims paid during that time 45.4 per cent. were due to lightning. The same reports show that of all rural buildings struck by lightning 21.4 per cent. were completely destroyed. It is a fair assumption that the reports of the forty Companies represent pretty accurately the conditions throughout the country.

Manifestly the problem of protection against lightning is an important and serious one, to grapple with which intelligently we must understand something of the principles of lightning and of lightning rods. To illustrate these I propose to show you a few simple experiments. Here in my hand I have a small piece of cheap scribbling paper. I rub it briskly upon my coat sleeve for a few moments and then place it against the window pane, and it adheres to the glass.

Here is another piece not rubbed. I place it against the glass and it does not adhere. Hence the rubbing has produced some new property in the paper. This property was first discovered by Thalies, an ancient Greek, in the year 640 B.C. While walking along the sea-shore he picked up a piece of amber. In order to burnish it he rubbed it briskly upon his garments, and in some way or other discovered that after being rubbed the amber had the property of attracting light substances, such as dry leaves, twigs, and chaff to itself. The Greek word for "amber" is "electron," and hence this new property first discovered in the amber has come to be known as "electricity." The paper in being rubbed upon the coat sleeve is said to have become electrified. In the year 70 A.D. electricity is again mentioned in history, but no real progress was made until the year 1600 A.D. Then Dr. Gilbert, a famous English scientist, discovered that all substances, when properly manipulated, could be electrified by rubbing, just as the amber was.

Here is another experiment. I have several light pith balls cut from the pith of an elder bush. You see them suspended from this little beam by silk threads. They are free to swing about like the pendulum of a clock. This object in my left hand is a piece of cat's fur, while in the right I have an ebonite or hard rubber rod. A large rubber comb would do just as well as the rod. To begin with, let me touch each one of these little pith balls with my hand. Now I touch the rod from end

to end with my hand. Placing the rod near the pith balls, we see that the rod neither attracts nor repels the balls. It may be said to be "neutral." But on rubbing the ebonite with the cat's fur and then holding it near the pith balls we see the balls are violently attracted to the rod. It has been *electrified* by friction against the cat's fur. Placing the rod close enough that one of the pith balls can *touch* it, we see that immediately after contact the ball, instead of being attracted, is strongly repelled. The ball has been electrified with part of the charge that was on the ebonite.

Other substances will produce electricity; for instance, here is a silk cloth and this is a glass rod. Rubbing the glass briskly with the silk and then placing the glass near one of the neutral pith balls, we again observe that the pith ball is attracted. The glass rod has also been electrified by friction. If the glass is placed close enough that the pith ball can touch it, then it immediately repels the pith ball. The pith ball on touching the glass becomes electrified by contact with part of the charge that was on the glass.

Now let me apply the electrified glass to the pith ball that was charged from the ebonite. The ball is attracted. Also charging the ebonite as before, and applying it to the ball charged from the glass, the ball is likewise attracted. Thus we see that the charge on the glass and ebonite are different. The glass will *repel* a ball charged from itself, but *attract* one that is charged from the ebonite; the ebonite likewise repels the ball charged from itself and attracts the one charged from the glass. Consequently, we see that there are two kinds of electricity, one of which is made by rubbing ebonite with cat's fur and the other by rubbing glass with silk; and, furthermore, we are able to say that *like charges repel and unlike charges attract*. This is a fundamental law in electricity. The electricity found on the glass is called *positive* and that on the ebonite *negative*. It can also be shown that whenever a positive charge is generated in one body by friction, an equal negative is generated in the other body which produced the friction.

One of these pith balls is suspended by a cotton thread. If I apply either the electrified ebonite or the electrified glass to this ball we see that the ball is very strongly attracted, and further that when the ball is allowed to touch the rod it clings to the rod instead of being repelled from it. In this position

it remains until by and by it lets go without being repelled. Testing this ball, we see that it is not charged as the ones suspended by the silk threads, and no charge is left on the ebonite, consequently we conclude that cotton and silk behave differently with regard to electricity. The cotton thread has allowed the charge to flow along it to the beam and away to the floor, and thence to the earth. The cotton is called a conductor, while the silk is called a non-conductor. Copper, or, indeed, any metal, would conduct the charge away much faster than even the cotton. The words "conductor" and "non-conductor" are not absolute, but rather relative. There is probably no substance which is an absolute non-conductor of electricity. The term "non-conductor" simply means that the substance is a poor conductor.

We have seen two ways of charging a body with electricity. One is by *friction*, and the other by *contact* with a charged body. There is a third, namely, by *induction*. Here is a brass ball supported on a glass base. Glass is a non-conductor or *insulator*. I first touch the brass ball to make it neutral. Now I apply it to a neutral pith ball and find no attraction, but when I charge the ebonite rod and hold it near, but not touching the brass ball, thus, we see that the pith ball is attracted. Thus we see the brass ball has been charged, not by either friction or contact, but by the influence of the charge on the ebonite rod a little distance away. The brass ball is said to be charged by *induction*.

Here we have two brass plates on glass stands, so arranged that we can place the plates face to face. Each plate has a small pith ball attached by a cotton thread, which will show when the plate is charged. From the ebonite I now charge one of these plates. The pith ball is strongly repelled and stands out almost in a horizontal position from the plate. Now, when the other plate is brought close to the charged one we note that the pith ball drops considerably, and I can put more electricity on the charged plate. Two insulated plates, side by side, are consequently called a *condenser*. A condenser enables us to store up a much larger charge of electricity.

Thus far we have produced only very small charges, and at the expenditure of considerable labour. However, forty years after Dr. Gilbert's discovery, an *electrical machine* was invented by which quite large charges could be generated. At first con-

densers were not used on the electrical machines, but shortly afterwards they were applied in the form of Leyden jars. A Leyden jar is an ordinary glass vessel like a fruit jar, covered with tin foil on the outside about half way up and on the inside about half way up. These two tin foils form the two plates of the condenser, and by means of Leyden jars very strong charges can be stored up. Here I have an electrical machine consisting of two glass plates, one of which is rotating and the other stationary. Without the Leyden jars I can produce a very fine spark which will jump over about two inches of space. When I connect up the two Leyden jars which you see, the spark is very much stronger, and sufficient to give one a severe shock. This spark looks exactly like the flash in lightning.

With this machine I can demonstrate another fundamental principle. Here are two sharp-pointed wires, one of which I attach to the positive side of the machine and the other to the negative, and I turn the points toward each other. Now we find that the machine does not produce a spark, and cannot be made to produce one. Here is a lighted candle which I hold to one of the points and it is extinguished. There is sufficient wind at each point to blow out the candle. There is only one conclusion possible, viz., that the electricity formed by the machine *leaks off these sharp points*, the positive gradually neutralising the negative, and preventing strokes from occurring.

The electric machine was discovered in 1640, but it took one hundred years to perfect it and produce the long sparks, which I have been able to show you, and to learn the fundamental principles of electricity. In 1751 Benjamin Franklin, observing the similarity between the lightning flash and the sparks that could be produced by an electric machine, came to the conclusion that lightning was nothing else than a discharge of electricity. To prove this he sent a kite up into the clouds as a thunderstorm was approaching. The string which held the kite was connected with an electric key in the laboratory. As soon as the string became wet electric sparks occurred at the key, which were in every respect like those produced with the electric machine. Franklin's conclusions then ran something as follows:—If lightning is a discharge of electricity, then it must obey the laws of electricity. Hence, it should be possible to prevent lightning in many cases, just as an electric spark



can be prevented in this machine by having a pointed wire attached to each side, or if a flash does occur, it should be possible to conduct it to the earth by wire without injury to the building bearing the wire. In other words, if lightning is a discharge of electricity, lightning rods must be a practical possibility.

Once Franklin had reached this conclusion, lightning rods began to be installed on the farm buildings throughout the United States, and later in Canada; but in the early stages Lightning Rod Companies knew very little of the laws of electricity, consequently were unable to instruct their men as to how buildings should be rodded, and hence in many cases the rods did not produce the protection they were expected to. Besides, numerous swindles in connection with lightning-rods were worked off on the farmers, so that in time lightning rods came into much disfavour. However, Sir William Snow Harris, in England, devised a system of lightning protectors for ships, which has practically done away with the one-time tremendous loss caused by lightning to the ships of the British Navy. So effective was his system that the late Queen Victoria bestowed a Knighthood and an annuity upon him in recognition of his great service to the Navy, and thereby to the British Empire. Throughout England, Germany, and France, where science was much more advanced than in America, lightning rods became the subject of study, and many buildings, especially costly ones like the great cathedrals, were protected by lightning rods, so that the loss to buildings of this kind by lightning was almost completely overcome. From this the use of lightning rods began to extend to the rural districts, with most beneficial results. This extensive use of the lightning rod in Europe, together with continual study in America, has had the effect of drawing public attention again to the subject, and now it can be demonstrated from practical data, gathered from both the United States and Canada, that lightning rods are an immense protection when properly installed.

By means of this machine and these little toy barns and houses, I can demonstrate to you that this must be so. Here is a metallic plate which I attach to the negative side of the machine; to the positive side I attach another plate which hangs a few inches above the first one. Let the bottom plate represent the earth, and the top one the cloud. When I turn the machine



the cloud becomes charged with positive and the earth with negative electricity, and by bringing the cloud and earth close enough together you see I can produce sparks or flashes which look exactly like the large flashes of lightning we see during thunderstorms. Here is a toy house with stove and stove-pipe. When I set this on the earth plate we see that every flash from the cloud strikes the stove-pipe, is conducted down to the stove, and jumps the air-gap from the stove to the earth. Here is a copper wire which I will put in contact with the stove-pipe, and lead down to the earth at both sides of the building. Now you see that the flash, instead of going down the stove-pipe to the stove and jumping the air-gap, follows the copper wire and is conducted down to the earth without any effect on the house. The copper wire offers less resistance to the flash than does the stove-pipe and air-gap, and naturally the flash follows the path of least resistance. But I can prevent a flash from occurring at all. Taking off the first wire which had no points, I put on the building another with two sharp points sticking upwards towards the cloud. Now you see I can turn this machine as fast as I like but no flash occurs. Putting the lighted candle to these points, we see that it is blown out as before, consequently the electricity generated by the machine is leaking off these points and gradually neutralising in the space between the cloud and the earth.

Here is another house with metal along the gutter to the eave-trough, which runs down near the ground. You see the eave-trough is also connected with the metal floor of the balcony. You see also that this house has a screen door. I place this house on the earth plate. As I turn the machine a flash occurs, which you see passes down to the screen door and jumps the air-gap at the floor and thus reaches the earth. Here is a little metallic figure representing a woman. I stand this in front of the screen door, and the flash strikes the woman instead of jumping the air-gap at the floor. I stand the woman under the balcony and the lightning takes a new path—instead of going by the screen door it follows the eave-trough to the balcony floor, thence strikes the woman and passes to the earth. I stand the woman by the eave-trough and the lightning takes another path still, following down the eave-trough and striking the woman. Placing the wire without points on the building, so it is in contact with the chimney, the flash follows the wire and the woman

is perfectly safe standing at the eave-trough, under the balcony, or at the screen door. But if I put on the other wire with the points, we see, as before, that the flash is entirely prevented from occurring.

Here is a barn with a hay-fork track. We see the flash enters the cupola, follows the track and down at one end of the barn. If I put a little gasoline on the end of the barn you see that the building is at once fired. As in the previous cases, the wire without points carries the stroke off without setting fire, while the wire with points prevents the flash entirely.

It is sometimes said that a metallic roof is perfect protection from lightning. Here is a metallic roof which I will put on one of these buildings, and we see that it is struck just the same as if it were an ordinary roof. We also see that the flash follows the same course as before. If, however, I connect a corner of this roof to the ground by a wire, the flash follows the wire. But I can prevent a flash from striking that metallic roof as in the other cases in two ways—first, I can use the rod with points; secondly, I can put a sharp-edged or notched ridge-board on the top, and now no flash occurs. I might here refer to the practice of putting a *round* metal form on the ridge of a metal roof. Nothing could be more dangerous than this from a lightning standpoint. The round form prevents the electricity from leaking off, and consequently tends to store up a charge and cause a stroke. If, instead of the round, a sharp-edged form, or one with teeth were used, it would be almost impossible for a metallic-roofed barn to be struck by lightning, if two, or better, four, corners were connected with the earth by ground wires.

Here is a metal barn with sharp-toothed ridge-board, and you see we cannot produce a stroke at all—the electricity leaks off the points. No rods are required.

Here is a wire fence which I attach to the earth plate. As I turn the machine a flash of lightning jumps from the cloud to the wire and from the wire to the earth. Here is a metal horse which I stand beside the fence, and instead of the lightning jumping the air-gap from the wire to the ground it strikes the horse. If, however, I connect the fence wire with the ground by means of a ground wire we see that the horse is perfectly safe. Moreover, if as well as putting the ground wire into the ground, I let it project a foot or two above the fence, ending in

a sharp point, no flash will strike the fence at all. The charge is neutralised by leaking off the point. Consequently, wire fences should be grounded, and the ground wire projected above the fence if the stock is to be protected in the best possible way.

I cannot conceive how any person could observe these experiments and phenomena and doubt the value of lightning rods. We have seen that by means of rods on these little toys we can either carry off a stroke without damage or we can prevent a stroke altogether. Hence, if in rodding our buildings we observe the same laws as have been observed in these experiments, the buildings must be largely protected. To be sure, in a real thunderstorm the clouds and earth are much larger compared with the buildings than the cloud and earth in this experiment, but there is only a small portion of the cloud that is nearer to the barn than to anything else on the earth. Consequently, we expect that the lightning rods in a real thunderstorm would protect the buildings just as well as these little ones do in this experiment.

Perhaps it might be interesting to note how the electricity is generated and accumulated to produce a thunderstorm. I have already shown you that friction between two substances will generate a charge of electricity on each. The air is in constant motion over the earth, and the friction between the air and the earth produces a positive charge of electricity on the particles of air and a negative charge on the earth. The charged air, when it in some way or other becomes warm, rises, and hence there is always an electrical strain in the atmosphere. But there is another way in which the air may become charged. By very delicate instruments and experiments it has been proven that when water evaporates the rising vapour is charged positively and the remaining water charged negatively. By and by the vapour which has risen high up in the air comes cool and begins to condense into very fine drops as the cloud appears. When one of these drops is formed from several smaller ones there is less surface for the electricity to be spread over, and consequently it is more dense. Thus it happens that in the clouds there are drops of various sizes, some of which are more strongly charged than others. The weak charges appear negative to the others, and consequently the electricity has the effect of attracting the drops together more rapidly than they otherwise would unite. This accounts for

the very sudden development of thunderstorms. When the condensation has gone on sufficiently the cloud becomes one great conductor, and the electricity leaves the surface of the drops and collects on the outside of the cloud. This produces another increase in intensity of the charge. Then, again, the cloud acts as one plate of a condenser, the earth as the other, and with the air between they actually form a great condenser similar in principle to the little plate condenser which I have shown you. Thus it is that such immense charges of electricity are produced in the cloud. As the positive gathers together in the cloud, the negative which was left behind in the earth gradually collects in the earth just under the cloud, so that all things are favourable to a violent flash once the electric pressure or attraction between the cloud and earth is sufficiently high to make the electricity jump across the intervening space.

Let us next inquire, "How shall we rod a building to protect it?"

1. GROUND WIRES.—For an ordinary building, not an "L" or "T," two ground wires should be used, preferably at corners diagonally opposite from each other. These ground wires should be sunk far enough into the earth that they are always in perpetual moisture. On the "L" or "T" shaped building there should be three ground wires.

2. CABLE.—Beginning at one "ground," the wire should extend up the corner, make a gradual turn at the eaves, go up the edge of the roof to the peak, along the peak to the other end, down the edge of the roof to the eave, and down the corner to the other "ground." All these turns should be rounded rather than angular.

3. POINTS.—At intervals along the ridge uprights should be placed with points that will not corrode. On these uprights ornamental devices of one kind or another, such as bright balls, are frequently placed. Within the last six months it has been stated to me by three different Companies manufacturing rods in Ontario that these fixtures are only ornamental, and that they are of no use in telling whether a building has been struck by lightning or not.

4. ATTACHMENT.—The rods should be in metallic connection with the building. Metal clips which surround the rod and may be nailed to the building are used. It is considered best



practice to have these clips so made that they hold the rod about one inch out from the building. The reason for this is that if the rods are placed so that they lie flat against the building there is danger of inflammable material, such as straw, leaves, chaff, etc., collecting between the rod and the building. Should the rod become highly heated with a flash this inflammable material would be likely to catch fire. With the rods held out about one inch there is not much likelihood of this occurring. This method of attachment is in direct opposition to that practised when lightning rods were first used. It was then considered desirable to insulate the rods from the building by glass or earthenware insulators. In a thunderstorm the entire outer surface of the building is charged with electricity, and by having the rods in metal connection with the building the charge is conducted by the metal to the rods, and thence to the point where it leaks off and neutralises the opposite charge existing in the cloud.

5. MATERIAL.—For a long time copper was considered the only material for lightning rods, the reason being that copper conducts a steady current of electricity six times as well as iron, the only other material that would be at all suitable. However, between the years 1888 and 1892, Sir Oliver Lodge carried on an investigation of the phenomena of lightning, and to his surprise, as well as of many scientists and of the whole lightning rod fraternity, he found that an iron wire will carry off a *sudden rush* of electricity better than a copper wire of the same size. Every discharge or current of electricity induces an opposite current along the same path. This is known as “self-induction.” This self-induction acts as a resistance to the current. While iron has greater resistance to a steady current than copper, yet the self-induction in the iron is much less than in the copper in case of a flash of lightning or an electric spark. Basing this judgment on this fact, Lodge considered and stated that, in his opinion, the day of copper lightning rods was done, although he added as a rider that in cities and towns where coal was burned he thought the iron rods would not prove durable owing to the action of the fumes upon the zinc coating of the galvanised wire. I am inclined to think that even in the country the question of durability is an important one. Galvanising is sometimes poorly done, and even if well done corrosion takes place wherever the rods are cut, *e.g.*, at the



ends, or wherever the rods are scratched. The same does not apply to a copper wire.

But it seems to me that in this judgment Lodge paid attention almost entirely to one duty of the lightning rods, namely, to carry off the flash in case the building is struck. Judging from the experiments we have seen, with the points placed on these little buildings the lightning rod has another and a greater duty to perform, namely, the prevention of strokes from occurring. To prevent a stroke there must be a gradual flow of electricity along the rod to the point and into the air. As a matter of fact, if I had with me some other apparatus, which was too cumbersome to bring, I could demonstrate to you that there is a steady flow along the wire when these points prevent sparks. Then it follows, that, if lightning rods prevent strokes there must be a steady flow of electricity along the rods. Now, for steady current, copper is six times as good a conductor as iron, hence, for preventing strokes, copper is the best. Thus we see that lightning rods have two functions to perform; that for the one purpose an iron rod is the best, and for the other a copper. Taking into consideration the question of durability, I am inclined to believe that on the whole copper is a somewhat better material than is iron. However, there is no doubt that a building rodded with iron rods is protected in a very large measure.

6. METALLIC BODIES IN BUILDING.—Lightning Rod Companies here vary somewhat in practice. Some connect all metallic bodies to the lightning rods, others do not. I am inclined to think the former is the better practice. If the metal body is a long one, like a steel track, it would probably be best to attach it to the system at both ends.

7. SYSTEMS.—All the cables on a building should be connected in one system. Sometimes it is found that on a "T" shaped building, for instance, the rods on the one part are not connected with those on the other part. Numerous instances are reported where damage has occurred between these two systems, the lightning striking the one system and jumping across to the other. Consequently, divided systems should be scrupulously avoided.

Before concluding, it might be well to inquire if we have any practical proof to support the scientific claim that lightning rods in many cases prevent strokes, and when they do occur

that rods properly installed usually carry them off safely. The Department of Physics at the Ontario Agricultural College has for ten or eleven years been collecting reports of damage done by lightning. Of course, most of them originate in the newspapers, thus we get reports of only the worst cases. Each party whose buildings are reported as being damaged by lightning is written to and a personal report secured. Of all buildings, both barns and houses, reported to us, one out of every two was burned. This, we see, is about twice the percentage arrived at by the report of the Fire Insurance Companies, and it is explained, as before noted, by the fact that we get track through the papers of only the worst cases of damage. Of the rodded buildings reported to us only one out of every six with rods reported in good repair is burned. Thus it would appear that if a building is struck the lightning rods save the difference between one-half and one-sixth. From the Insurance Companies we get the same figures regarding the rodded buildings; that is, of all rodded buildings struck, with rods in good repair, one out of six is burned. The Insurance Companies also tell us that of all buildings struck by lightning two are burned out of every nine, so we see that whether we take the College reports or whether we take the reports from the Insurance Companies, the rods installed as they are throughout the country appear to have a considerable protective value if a building is struck.

I believe much better results could be secured. One is disposed to ask—"If lightning rods are of such protective value, how is it any building with rods reported to be in good repair should be burned?" In the majority of cases where this happens I am inclined to think there must be some defect in installing the rods.

Now, as to the other function of the lightning rod, namely, to prevent strokes from occurring, we have as yet been able to obtain no definite statistics. We do know from the reports of the Insurance Companies of all the buildings struck in Ontario about 1.5 per cent. are rodded. The same rate is true in Iowa. If we just knew what percentage of all farm buildings are rodded then we could answer the question conclusively. If we knew that 40 per cent. are rodded, and that only 1.5 per cent. of those struck are rodded, then we would know that the rods had prevented strokes on a large number of buildings.

Let me illustrate still further: Suppose that an Insurance Company has 1000 risks, of which 400 are on rodded buildings. Let us suppose that Company has one hundred lightning claims to settle. If the rods have no effect in either preventing or attracting strokes, then we would expect that of the one hundred claims forty would be on rodded buildings and sixty on unrodded. If we should find that ninety-eight out of one hundred claims were on rodded buildings we would say at once that the rods increased the hazard, but if, on the other hand, we should find that of the one hundred claims only two were on rodded buildings we would conclude that the rods had decreased the hazard, and the actual per cent. of decrease could readily be calculated. But we don't know what percentage of the buildings in Ontario are rodded. Some years ago, while travelling from Berlin to Parkhill, I counted all the buildings that were close enough for me to discern whether they were rodded or not, and to my surprise over 38 per cent. of them were rodded. In other districts, however, scarcely a building is rodded, and in still others nearly all are rodded. If the Mutual Fire Insurance Companies could just tell me how many rodded buildings they have risks on, and also how many unrodded ones, these reports when averaged would indicate pretty closely the percentage of buildings that are rodded. To give this information would doubtless in many cases mean much work and some expense for correspondence with the owners as to this point, but it seems to me that the end would justify the expenditure. If, in this way, we could prove to the Insurance Companies that the hazard on rodded buildings was, say, 20 per cent. or 30 per cent. less than on unrodded ones, and the Insurance Companies were to make even a slight reduction in rates on rodded buildings, it would be only a few years until most of the buildings would be rodded, and in the saving of loss the Companies would receive many times the money spent in ascertaining the number of rodded buildings which they have insured. This information, if we had it, would be a very strong argument to the farmers even without a reduction in premium rates.

However, we have some information which bears strongly upon this point. Not long ago I learned that in Michigan there is a Farmers' Insurance Company which insures only rodded buildings. The full name of the Company is the

“Farmers’ Mutual Lightning Protected Fire Insurance Company”—Address Flint, Michigan. Upon learning of this Company I wrote them for information. The Secretary replies that they have been doing business three years and a half, that they have 5,011 policies in force, and upwards of \$15,100,000 at risk. He says further:—“We have never lost a building by lightning, but we had a damage of \$10.00 to a house this year. We claim the house was not properly rodged, and we send you herewith a diagram showing the rodding, etc.” I ask you Insurance men present—Is there anyone whose Company for any period of three years has never had a loss due to lightning? No one. This is just as I expected. I consider this information from the Flint Company the strongest proof I have ever seen of the efficiency of lightning rods. This Company will not insure a building unless the owner is able to give a ground rod guarantee, both from the maker of the rods and from himself. The maker must certify that the rods go down in the ground not less than.....feet, and the farmer must certify that he saw them put down and therefore knows that they go down that deep. (2) There is a point here for our Ontario farmers, although the Insurance Companies do not insist upon a ground rod guarantee. Every farmer whose buildings are being rodged should be present and see the ground connections put in so that he is sure they go deep enough. A few years ago we had a report of a building which was burned shortly after it had been rodged. On examination it was found that the ground rod, instead of being put 6 or 8 feet down, had 6 or 8 feet of wire coiled up and buried just beneath the surface of the ground. This coil was probably the cause of that building being burned. Probably nothing else could have been done to make so sure of burning the building in case it was struck. Indeed, when the Hydro-electric Commission or any of the Electrical Companies wish to protect their machinery from lightning that may come in to the station over the wires they use what is called a choke coil, which consists simply of 5 or 6 turns of the line wire just after it comes inside the station. The lightning, owing to the high self-induction of this coil, will not pass through the coil, but, in preference, will jump an air-gap that is provided and strike a ground wire that is put there for the purpose. This coil of wire in the case of the lightning rods acted as a choke coil and the lightning was bound to flash

off and go through the building. It behoves every farmer to see that nothing of this kind is done when rodding his buildings.

Again, one is disposed to ask, if rods in many cases prevent strokes, why not in all cases? The points allow the charge to leak off, but there is a limit to the rate at which this leakage can occur. If the charge accumulates at a rate faster than that, then a flash may take place. This is sometimes brought about in the following way:—Two clouds lie near each other. The buildings under the first are rodded, but not under the second. A flash occurs between the second and the ground, followed by a flash between the first cloud and the second. This changes the pressure in the first cloud so suddenly that the leakage does not neutralise the charges as fast as the difference in pressure demands, hence a flash occurs. But that flash is much weaker than if the rods had not been there.

Viewing the matter from all standpoints, scientific, practical, and statistical, there is no other conclusion than that lightning rods, properly installed, will prevent many strokes, and where strokes do occur carry them off safely to the earth in most cases.



# INSURANCE AGAINST LOSS OF PROFITS THROUGH FIRE.

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By FRANK MOORE (Yorkshire).

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*A Paper read before the Insurance Institute of Ireland,  
28th March, 1913.*

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IN presenting this paper to you, I wish you to understand at the outset that I do not profess to be an expert on the subject, but having taken a keen interest in Profits Insurance since the time that the leading Fire Offices commenced to underwrite the business a few years ago, it was thought that a short paper giving just a general outline of the subject—I have not attempted to treat it in any way exhaustively—might possibly be of some educational value to the younger members of our Institute, or to those who will be taking this subject in the Chartered Institute Examinations.

During the course of the paper the thought expressed by Plato may occur to some of you, namely, “that the punishment which all auditors suffer, as the penalty of abstaining to speak, is that they shall hear worse orators than themselves,” and, if so, I trust that thought will recur to you at the close of the paper, and that you will not abstain from speaking when the time comes for discussion, for I certainly think that the real benefit of these papers to the members of our Institute is to be found in the subsequent discussion of the points which they raise. If, therefore, this paper is the means of arousing a little more interest in this class of Insurance, a class which is expanding and becoming day by day a more important branch of our business, I shall feel satisfied that my efforts have been not altogether in vain.

## TITLE.

There was a considerable amount of discussion in the Insurance Press a short time ago as to whether “Profits Insurance” or “Consequential Loss” is the more correct title for this class

of business, but as both names are short cuts to describe the real contingency covered, which is "Loss of Profits and Standing Charges consequent on a fire," you will probably agree that we should be more profitably employed in studying some of the useful and interesting problems that arise in dealing with the business generally than in discussing the subtle distinctions of its title.

I shall therefore content myself with calling it "Profits Insurance."

#### HISTORY.

An attempt was made as far back as the year 1860 to provide some sort of indemnity against the consequential loss of trade following a fire in the form of an Excess Fire Policy, which undertook to pay that percentage of the fire loss which the sum insured bore to the total fire insurance on contents. A little consideration will show that an Excess Fire Policy is a very crude and undesirable method of compensation for loss of trade consequent on a fire, as the trading loss has no relation whatever to the amount of fire damage.

For instance, a comparatively small fire loss, such as the destruction of an engine house at a mill, might result in a very serious loss of trade by causing a stoppage of the entire factory through the supply of power being cut off, and in such a case the insured would be quite inadequately compensated by the small amount he would recover under an Excess Fire Policy.

On the other hand, a fire in a store might cause a considerable amount of fire damage, but a very small loss of trade, and in this case the insured would recover more under his Excess Fire Policy than his actual loss of trade amounted to. Consequently Fire Offices rightly looked with disfavour on such Excess Policies on moral grounds.

#### PRESENT FORM OF INDEMNITY.

Some more suitable form of indemnity had therefore to be found, but before describing the form of policy now in use amongst Fire Offices generally, it might be well to consider what are the financial losses following a fire, so that we may ascertain the true standard of their measurement.

The object of a Profits Policy is to compensate the insured for financial loss of trade caused by the capital invested in his business becoming for a time unproductive in consequence of a fire—in other words, to maintain the earning power of his business.

The productiveness of a business is measured by the amount of its “turnover” or “output,” and any diminution in turnover or output caused by the fire will therefore be the proper standard for measuring the loss sustained.

Now, there are various fixed expenses and charges which the insured will require to continue paying, even though his business is interrupted, such as rent, interest, etc., in addition to his net profit, which he wishes to be compensated for under the policy, and he therefore insures for a sum representing the total of these two items, namely, net profit and standing charges.

The other items which go to produce his “turnover” or “output” are:—

- (1) Cost of raw materials or goods, and
- (2) Wages and sundry trade expenses,

but these do not require to be paid whilst the business is stopped, and it is therefore not necessary to insure them.

If, therefore, the sum of the annual net profit and standing charges amount to, say, 30 per cent. of the annual turnover or output, it is obvious that the insured will be properly compensated for his loss if he recovers under his policy 30 per cent. of the diminution in turnover or output caused by the fire, the other 70 per cent. of the turnover being represented by cost of raw materials and goods, wages, and sundry trade expenses, which the insured does not require to pay during the stoppage of business.

This, then, is the principle on which a loss under a Profits Policy is ascertained, and the terms of settlement, which are set out in the policy, are briefly as follows:—

The sum insured is the amount of net profit and standing charges for the preceding financial year, and on the occurrence of a loss an accountant is mutually agreed upon by the Office and the insured to undertake the settlement, the Office paying his fees, as in the case of fire assessors.

This accountant first satisfies himself that the sum insured is not in excess of the actual net profit and standing charges for the financial year preceding the fire; he then proceeds to find the percentage which the sum insured bears to the previous year's turnover, and calculates the amount of loss to be paid under the policy by taking that percentage of the shortage in turnover for the months following the fire, as compared with the corresponding months in the preceding year.

It is usual to give the insured the option when effecting a policy of choosing, for the purposes of comparison, either the turnover figures for the preceding year or the average over the two or three immediately preceding years, but it is doubtful if it is advisable for Offices to allow this option without first going into the figures of the insured's business, and satisfying themselves that such an arrangement would give an equitable settlement in case of loss, as the insured's selection is naturally against the Office.

The three years' basis was the one first adopted, but this was afterwards modified, and policies were issued on a basis of either one, two, or three years. It is contended by some that the original method of taking the average over three years gave a fairer settlement than if the previous year only were taken, and although this may be so where the turnover fluctuates irregularly, it would act unfairly in the case of a business showing either a fairly regularly increasing or decreasing turnover. For example, if a fire occurred at the end of January, and the turnover for the months of February in each of the preceding three years were £4,000, £5,000, and £6,000 respectively, the probability is that the turnover for February after the fire would be £7,000 if the regular increase continued. In such a case the three years' average would be £5,000, whereas if the one year's basis were adopted the figure would be £6,000, and this would be nearer to the probable turnover for the month after the fire, and the one year's basis would therefore be fairer than the average over three years. Similarly, if a business exhibited a regularly decreasing turnover of, say, £6,000, £5,000, and £4,000 for the months of February in the preceding three years, the one year's basis would give a fairer comparison, namely, £4,000, than the three years' method (£5,000), as in the ordinary course the turnover for the month following the fire would probably be £3,000.

Should the sum insured be found to exceed the actual amount of net profit and standing charges for the preceding year, then the latter amount is taken instead of the sum insured to ascertain the percentage payable.

#### PERIOD OF LIABILITY.

Profits Policies are annual contracts (except in special cases), but the insured has to state on the proposal form the period for which he desires to be indemnified after any fire. This period is called the "Term of Indemnity" or "Period of Liability," and varies in different risks, according to the insured's forecast of the time required for rebuilding the premises and getting the business going again in a normal way. The "Period of Liability" chosen is usually three, six, nine, or twelve months, and occasionally as long as two years. It is obvious that a small factory or warehouse risk, containing only simple machinery, would not take so long a time to get working again as would a large factory or one containing heavy and complicated machinery.

#### INCREASED COST OF WORKING.

The policy contains a clause requiring the insured to employ all reasonable means to maintain his turnover as far as possible during the period of liability after a fire, either by taking temporary premises in which to carry on his business, buying goods in other markets at enhanced prices, if necessary, to supply his customers, arranging for the work to be done elsewhere, or by other available means, and the Office undertakes to pay the increased costs of working so incurred with its consent in maintaining the turnover during the period of liability. But it is stipulated in the policy that the total of the amounts payable in respect of shortage in turnover and increased cost of working shall not in any case exceed the amount that would have been payable had the business been completely stopped for the whole period of liability.

The payment of "increased cost of working" benefits both the insured and the Office. It is a distinct advantage to the insured, as it enables him to take temporary premises in which to carry on his business, or to buy goods at increased prices in



other markets to supply his customers, thus retaining their custom. Without this provision the insured would probably be unable to continue supplying his customers whilst his business was interrupted, consequently they would have to go elsewhere for their goods, and some would not come back to him again when he resumed business, and so his loss might extend far beyond the period for which he is compensated for by his policy. The payment of increased charges, therefore, protects the insured from permanent loss of business.

The Office also reaps an advantage from it, because the payment acts as an inducement to the insured to maintain his turnover as far as possible, and this, of course, reduces the amount of loss payable under the policy. If the Office did not undertake to pay these increased costs, the insured might consider that it would not be worth his while incurring any extra expense to keep the business going during the term of indemnity to benefit the Office, and so he would be more inclined to let the Office pay the full loss.

It is solely in order to facilitate the insured's financial arrangements that the loss is paid month by month, instead of waiting until the period of liability has expired and the final figures are available, which, in some instances, might be as long as two years.

#### POLICIES SUBJECT TO AVERAGE IN EFFECT.

A firm may insure either their net profit or standing charges, or both, either wholly or in part, but the standing charges it is desired to insure must be named in the policy, and only those so specified, and which are actually paid or payable, even though the business is at a standstill, will be taken into account in the loss settlement.

Wages may be insured if the insured desire to pay their work-people's wages during a stoppage in order to retain their labour, so that it may be available when work is restarted. Factories in country districts usually find it desirable to do this.

It will be seen that this condition has the effect of making the insurance subject to average, as if a firm elect to insure a portion only of their insurable net profit and standing charges, they bear a proportionate share of any loss themselves, as the

percentage of the shortage in turnover recovered under the policy is, of course, proportionately smaller than if they had insured for *the full amount*.

It would, therefore, be well to remind policy-holders to revise the sums insured under their policies each year to correspond with the actual amount of their net profit and standing charges for the previous financial year. A note on the Renewal Notice drawing attention to this point would be a convenient form of reminder.

DEFINITIONS OF "NET PROFIT," "STANDING CHARGES,"  
"TURNOVER," AND "OUTPUT."

NET PROFIT may be defined as the surplus arising from the year's trading after *deducting* all working expenses, standing charges, cost of repairs to machinery due to wear and tear, a reasonable allowance for depreciation, bad debts, legal expenses, and all capital receipts and accretions (such as premium on any shares issued), and all outlay properly chargeable to capital.

STANDING CHARGES are the fixed expenses of the business which continue to be paid or payable, even during a stoppage through fire. They are deemed to accrue from day to day, and comprise the following:—Rents, rates, and taxes; interest on debentures, mortgages, borrowed capital, and bank overdrafts; salaries and wages to employees under agreement; directors' and auditors' fees.

The following working expenses may also be insured under the heading of Standing Charges, viz.:—General office expenses, salaries (other than those mentioned above) and wages to skilled employees, insurance premiums, stable upkeep, travelling expenses, advertising, etc.

Preference dividends, like ordinary dividends, are paid out of net profit, and should therefore be included under that head, and not under standing charges.

Contributions under the National Insurance Act do not constitute a standing charge, as they are not payable whilst work is suspended, except in respect of those employees whose salaries continue to be paid.

For policies on manufacturing risks, "output" is the standard usually taken for measuring the loss, and for shops or

wholesale or retail distributing businesses "turnover" is the basis adopted.

"OUTPUT" may be defined as the quantity of goods produced, irrespective of sales, and "TURNOVER" as the sum charged for goods sold and delivered from the premises.

#### EXCEPTIONAL CIRCUMSTANCE CLAUSE.

Profits Policies generally contain what is called an "Exceptional Circumstance Clause," usually incorporated in the printed conditions on the back of the document, which runs somewhat as follows:—

"In adjusting the amount of a loss the accountant shall allow any additions to and deductions from the receipts and expenses, which, having regard to any extraordinary or other circumstances of the business, the accountant may think ought to be made, whether relating to the period of indemnity or to any previous date."

It will be seen that this condition gives the accountant a very wide discretionary power in adjusting the amount of loss, and materially qualifies the basic method of settlement described in the body of the policy. It is a very important clause, and might well form the subject of a separate paper to itself, without even then exhausting all its possibilities. I shall only be able to touch on one or two examples of "exceptional circumstances."

(1) *An increase or decrease in the cost of raw material to a factory.* Take, for example, a factory which is dependent on the open market for its supply of raw material, such as a rubber-tyre works. The manufacturer cannot vary the selling price of his goods with every market fluctuation in the cost of the raw material, and if, at the time of the fire, a tyre manufacturer is buying his rubber at, say, 6s. a pound, whereas at the same time in the previous year it cost him only 4s. per pound, it is obvious that his profit would have been less than in the previous year when he was buying his rubber cheaper.

(2) *Strikes* occurring either during the period of comparison in the preceding year, or during the period of interruption after a fire. To ignore the loss of turnover caused by a strike in the preceding year, and to take the reduced turnover for

those months for the purpose of comparison, would be unfair to the insured, and the amount payable under the policy so calculated would not compensate him adequately for his loss. On the other hand, if the special circumstance of a general strike occurring in the trade during the period of interruption were not taken into account in the loss settlement, the insured would be recovering under the policy more than he would have made out of his business in the ordinary course had no fire occurred. There are many other points of interest in the consideration of the various effects which a strike or lock-out may produce in a business, such as the existence of a strike at the time of the fire, a partial strike among some of the hands, or a strike in one department only of a factory. The difficulties arising in such cases would fall to be dealt with by the accountant under the heading of "exceptional circumstances."

(3) The case of an increase or reduction in the *duty imposed by foreign countries on imported manufactured goods*. An increased or newly-imposed duty would affect the profits and turnover of an exporter of such goods in this country adversely, unless he were able to increase the sale price of those goods by the amount of the extra duty imposed, and even then it is probable that his turnover would suffer some diminution through his prices being raised. The accountant would have to estimate the probable effect of such circumstances on the profits and turnover, either from the experience of any preceding months during which the increased duty had been in force, or defer payment of the loss in respect of the portion of the trade affected until the results of the duty could be ascertained by actual experience after the business had recovered from the effects of the fire.

The present war in Turkey would have an important effect on the turnover of a merchant doing business in that country, and this would come under the "exceptional circumstance" clause.

#### VARYING MONTHLY TURNOVER.

It should be noted that the *ordinary fluctuations* in the monthly turnover of a business are outside the scope of the "exceptional circumstance" condition. It would probably be hard to find a business with an absolutely uniform turnover, for, although the annual turnover may vary but little from

year to year, it is very unlikely that the turnover month by month will be the same as for each corresponding month in the previous year. Some businesses may show a turnover progressing month by month; others will exhibit a gradually decreasing monthly turnover. In such cases a clause should be embodied in the policy to the effect that the shortage in turnover shall be ascertained in the event of a loss by deducting the actual monthly turnover after the fire from the turnover for the same month in the previous year, increased or reduced, as the case may be, by the average increase or reduction which the business has actually shown for, say, the previous three years.

It is the practice of some Offices to issue policies without making any enquiry into the past monthly turnover figures of the business, but such policies which contain no provision for variations in turnover very often do not provide an equitable indemnity.

Before a policy is issued it is advisable to ascertain the amount of the turnover for each month during the past two or three years, and these figures should be carefully studied so that a suitable method may be adopted for calculating the shortage in turnover due to a fire, and embodied in the policy.

The hard-and-fast rule of the basic principle will require to be so modified as to suit the special circumstances of each particular case, and more care and forethought are required in drafting Profits Policies than Fire Policies even.

#### FIRE INSURANCE TO BE KEPT IN FORCE ON THE PROPERTY.

All Profits Policies contain a Warranty that the insured's property in the premises shall be kept covered against fire damage, and it might be advisable to go further and stipulate that the fire insurance should be for an adequate amount, say, at least three-fourths of its value, to guard against a profits loss being unduly prolonged through the amount recovered under the Fire Policy being insufficient to enable the insured to proceed without delay with the reinstatement of the premises. This point will require special consideration when dealing with proposals to insure the standing charges of churches and other ecclesiastical buildings which are notoriously under-insured.



### BOILER AND EXPLOSION RISK.

In addition to covering loss consequent on fire and lightning, Profits Policies usually extend also to cover loss resulting from boiler explosion and gas explosion, but before such an extension is granted it would be well to ascertain that the Fire Policy covers the explosion risk too, otherwise the Office insuring profits would, in the event of an explosion, find itself in the position of having to pay a loss under its policy, whilst no loss was payable under the Fire Policy for the material damage caused, and the profits loss might consequently be greatly increased through the insured having insufficient funds to reinstate the building without delay.

### POLICY CONDITIONS.

Some of the usual conditions of the policy have been referred to; the others generally include:—

- (1) Definitions of “Accountant,” “Financial Year,” and “Net Profit.”
- (2) Riot and Civil Commotion, etc., Clause.
- (3) The Voiding of the Policy through Misstatements, Increase of Risk, Liquidation, or Fraud.
- (4) Notice of Loss, and requirements in the furnishing of Claims, etc.
- (5) Subsisting Insurances.
- (6) Subrogation.
- (7) Arbitration.

### PROPER ACCOUNT BOOKS TO BE KEPT AND REGULARLY AUDITED.

Profits Policies should only be issued on risks where proper account books are kept and periodically audited, as it would be impossible to ascertain the amount of loss in the absence of the books, and in this connection it would be advisable to have the books kept in a fireproof safe, when not in use, to obviate the difficulties that would arise in the event of the books being destroyed through fire. In such an event a copy of the insured's last balance-sheet and yearly trading account would, no doubt, be obtainable from their auditors, but it is unlikely that the auditors would have the monthly turnover figures, and those are the particulars required for the assessment of the loss.

## RENT.

It is more equitable, both from the point of view of the Office and the insured, to insure Rent under the Profits Policy rather than in the Fire Policy. Rent payable, which comes under the heading of Standing Charges, is, of course, referred to, and not Rent Receivable, which is part of the profits. Take, for example, a seaside hotel where the season is a short one, all the profit and the money for defraying the expenses during the rest of the year being made during the summer months, say, June, July, August, and September. Should a serious fire occur in such a risk at the beginning of June, rendering the premises untenable for four months, the whole season's trade would be lost, and the *insured's actual loss would be a whole year's rent*. Now, if the annual rent were insured under a Fire Policy, the insured would not be adequately compensated, as he would only recover one-third of a year's rent, but under a Profits Policy he would be properly indemnified, as he would be paid a full year's rent, assuming that the whole year's turnover of the business were confined to those four months. On the other hand, if the fire occurred after the season was over, say, in November, the Fire Policy would pay just the same amount, namely, one-third of a year's rent, although the insured would actually suffer no loss of rent, as he made his whole year's rent in the busy season; but under a Profits Policy no loss of rent would be payable, as there would be no loss of turnover.

NET PROFIT AND STANDING CHARGES SHOULD BE INSURED  
IN ONE SUM.

Net profit and standing charges should be insured together in one sum, and not separately stated in the policy, in order that the insured may not suffer in the event of a loss through his standing charges having increased and his net profit having consequently been reduced by a corresponding amount, the total of the net profit and standing charges remaining unchanged.

## MORAL HAZARD.

The granting of a Profits Policy, provided it is properly drafted, should not affect the moral hazard, as the insured

cannot recover more under the policy than he would have made out of his business in the ordinary way had a fire not occurred.

If, however, a firm is trading at a loss, and not even earning sufficient to pay its standing charges, the question of moral hazard then arises, as the firm would be in a better position after a fire than it would if no fire had occurred, because its standing charges would be paid under a Profits Policy, although in the ordinary course of business they would not have been earned. A business which is being carried on at a loss is consequently an undesirable risk for Profits Insurance.

#### RATES.

The rates of premium charged for Profits Insurance are based on the average annual fire rate for the contents of the risk, the percentage of the fire rate varying according to the period of indemnity required. Thus, for a twelve months' indemnity the profits rate is usually about the same as the average annual fire rate, and the rate is charged on the full year's net profit and standing charges, irrespective of whether the period of indemnity is one month or twelve. The premium is, of course, less the shorter the period of indemnity, as a smaller percentage of the fire rate is charged.

It is doubtful whether this practice of charging fixed percentages of the fire rate for Profits Insurance for all trades is quite equitable, as although the risk of occurrence is the same in both classes of insurance, the extent of a profits loss does not depend on the extent of the fire damage. For instance, a preferential scale of rating might be adopted for certain warehouses and wholesale trades which are very much lighter risks from a Profits than a Fire point of view, as only a comparatively small loss of turnover would be likely to follow a fire in cases where business could immediately be resumed in temporary premises.

#### RETENTIONS.

No hard and fast List of Limits can be used for Profits Insurance, as the retention will depend on the special features of each risk. Many Offices, if they have no Fire Insurance on

the risk, retain such a proportion of the Profits Insurance as will limit their loss, in the event of a total stoppage, to the amount of their usual fire limit for the risk. But if also interested in the Fire Insurance, the liability under the Profits Policy is often reduced to about one-half of the fire limit, although some Offices will hold a full Profits limit in addition to their fire limit.

You will appreciate the distinction between "liability" and "retention" in reference to the re-insurance of Profits Policies, as the amount that may be retained is dependent on the term of liability.

Thus, if a business shows a uniform turnover for each month throughout the year, it is evident that in the case of a six months' indemnity the liability of the Office cannot exceed one-half of the annual net profit and standing charges, even in the event of a total stoppage for the whole six months, and similarly if the indemnity is for three months, the limit of the Office's liability under the policy will be one-fourth of the sum insured.

Should the turnover not be uniform month by month, and this will more often be found to be the case, the monthly figures for the preceding year should be referred to, and the largest amount of turnover for any consecutive three or six months (the term of indemnity) ascertained. The liability of the Office will then be the percentage which the sum insured bears to the previous year's turnover of that figure.

#### SURVEYS.

In surveying risks for Profits Insurance the usual particulars given in a Fire Plan and Report will be required, and, in addition, some information should be given on the following points:—

(1) Is the business being fully protected for net profit and standing charges?

(2) Do the goods in course of process pass from one building to another?

(3) Would a fire destroying one building interfere with the turnover or output of goods in another building?

(4) Is the manufacture or sale of specialities carried on?

(5) Is there any specially constructed plant or machinery?

(6) Do the insured despatch the goods as manufactured, or have they a warehouse detached where the same are stored?

(7) Are there any stocks of raw materials or goods which would be difficult to replace?

(8) Could the insured buy similar goods elsewhere to supply their customers?

(9) Could the business be conducted elsewhere?

(10) Would an explosion be likely to damage the motive plant or other machinery?

Although Profits Insurance deals to a large extent with figures, and might on that account be thought to be rather a dry subject, it really is a very interesting study, and the more thoroughly one considers the varied questions that arise, the more fascinating does the subject become. This class of insurance is even yet only in its infancy, and its growth will depend to a large extent on the amount of interest taken in it by Insurance men, as an intimate knowledge of its details is necessary before the contract can be clearly explained to the public.





# BREWERIES AND DISTILLERIES.

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and Bedford, 17th November, 1911.*

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As probably all you gentlemen know, the only way to properly appreciate and gauge the fire risk in a modern trade or manufacturing process is to thoroughly understand that process. Generally speaking, a fire happens and we see the results, but the cause we can only guess at. We know that so many fires producing so much loss to Insurance Companies happen in a particular industry in a given period, and our assessment of the risk, in other words, our quotation or rate, is governed by that experience, though tempered by consideration of competition, etc. That, however, though valuable, is a rough and ready way of fire-underwriting, and as competition becomes keener it is necessary to devote more consideration proportionately to causes than to results. Consideration is useless without understanding, and therefore every Fire man, in order to be competent, should have a more or less complete knowledge of the inherent fire hazards of every industry he is called upon to deal with. All the more so because trade processes are continually changing, and what was considered a moderate risk last year is a heavy one to-day, or *vice versa*, and I find in my practice as a Surveyor that much less information is afforded nowadays than used to be given a few years ago.

With these few preliminary remarks, I will proceed to give you a necessarily limited description of the two great businesses of brewing and distilling, and I must start by saying that this paper was prepared by my colleague and chief, Mr. Fulkes, and myself for examination classes for the London Institute, so you must not think I am underrating your intelligence or experience if some of the statements are as A B C to you.

I will start with brewing, as you are more likely to be called upon to deal with Breweries and allied trades than with Distilleries.

### BREWING.

Without going back to the very earliest records of this industry, I should just like to quote the method adopted by the ancient Britons as described by Isidorus in the fifth century A.D. It runs as follows:—"The grain is steeped in water and made to germinate; it is then dried and ground, after which it is infused with water, which being fermented, becomes a pleasant and intoxicating drink." As it was in the days of the ancient Britons, so it is now.

I think it will be as well to run through the principal raw materials used, and then to describe the various processes necessary to convert them into "that pleasant intoxicating drink" referred to by the late Mr. "Isidorus."

The raw materials then are:—

Malt, with sundry malt adjuncts such as flaked maize, rice, wheat, and sugar.

Hops, and, I am sorry to have to add, sometimes hop substitutes—gentian, camomile, and quassia.

Water, which, by-the-by, is never heard of in a brewery under that name. It is always liquor—hot liquor, cold liquor, liquor tank, and so forth.

Various beers require different qualities in the water to produce the best results, and it is for this reason that different localities become celebrated for different kinds of beer.

Water containing a large proportion of gypsum (calcium sulphate) is suitable for brewing pale ale. A smaller proportion of the same mineral renders the water more suitable for mild ale, while water containing no gypsum, but rich in alkali-sulphates and carbonates, is adapted for producing black beers.

The preparation of the first-named, *i.e.*, malt, is generally carried on as a separate trade, but I think a brief description of the process, and its object, is desirable.

Before we start on this it will, perhaps, be as well to take note of a few technical words and their meanings, and which may not be familiar to some of you.

*Diastase*.—A substance in the grain and formed in the grain during germination, which has the power of converting starch into maltose and dextrin.

*Maltose*.—That variety of sugar formed by the action of diastase on starch and which is readily fermented.

*Dextrin*.—Another matter formed by the action of diastase on starch, but not so readily fermented in the cask, producing beneficial and pleasing results on the beer.

The grain from which malt is made is barley, containing as it does a large proportion of starch. From starch is obtained alcohol by fermentation, but as starch is not directly fermentable it must first be converted into maltose. It is to aid this conversion that the malting of the grain becomes necessary.

Originally malted barley only was used, but when it became realised that it was the sugar so produced that yielded the alcohol, sugar from other sources was added.

Barley for malting should be good and well developed, light yellow in colour, dry, plump and even in size; it should have a thin husk and be free from bacteria and moulds. In weight it should average 56 lbs. to the bushel and yield a malt of 42 lbs., showing a loss of about 25 per cent. in malting.

The processes of malting are as follows:—

*Steeping*.—The barley is first run into steeping tanks and clean cold water added. Unsound grain being light, floats on the surface and can be skimmed off. (The object of steeping is to supply sufficient moisture for germination.) The water is changed occasionally and this process lasts 40 to 70 hours. When sufficiently soaked the water is run off, and the grain placed in a “couch” or heap to keep in the heat of germination, and thus aid the process.

*Flooring and Growing*.—The grain is next spread out on the growing or malting floor to a depth of 3 to 12 inches according to the temperature, which should not exceed 50 degrees F. After 24 hours the grain is “ploughed” or turned over twice a day for three or four days, and periodically sprinkled with water. When the acrospire, *i.e.*, the young shoot, and the rootlet are sufficiently developed the grain is known as “green malt,” and is ready for the drying kiln.

Before describing the kilning, I ought to mention a more modern form of malting known as pneumatic malting. In this system the steeped barley is run into iron germinating cases with perforated false bottoms, where it is allowed to heat as in

a "couch." When it is necessary to check the heat, cool air is driven under the false bottoms and oxygen is thus supplied to the grain, the carbon dioxide generated by germination is removed, and the temperature regulated. The grain is periodically stirred by means of agitators.

The advantage claimed for this system is the better control of air and moisture to the germinating grain.

The green malt contains the maximum amount of diastase which converts the starch into maltose and dextrin in the mash tun later on, but it is necessary to dry or kiln the grain to arrest further germination, to destroy any mould or fungoid growths that may have appeared, and also to develop certain changes that impart flavour to the resulting beer.

*Drying and Kilning.*—The kiln consists of a brick building with conical roof, having suitable ventilation at its apex. The lower portion contains the furnace or furnaces of coke or anthracite coal, with generally two floors over, the upper one constructed either of stout wire gauze or perforated earthenware tiles.

The green malt is first spread on the upper floor to a depth of 8 to 10 inches and dried at a temperature of about 180 degrees F. It is then dropped through on to the lower floor and further dried. These temperatures apply to pale malt. "Medium" and "high-dried" malt are finished at 200 degrees to 230 degrees according to the class of beer to be brewed.

The drying process occupies several days, and the malt is turned over, either by hand or machinery, as often as necessary. The dried malt is then removed from the kiln, screened, to remove malt dust and other rubbish, and is ready for use or for storage in bins.

Before passing on to the brewing proper, I ought to refer here to certain malt adjuncts. As the malted barley contains more diastase than is required to convert the starch therein contained into maltose, more starch is added in the form of other grain, such as maize and rice, which has been previously flaked and dried, but has not gone through the germinating process.

*Mashing.*—Having malted and dried our barley, we can proceed to the first process of Brewing proper, known as Mashing, for the production of the liquor called Wort. The



malt is first ground, or rather crushed, between smooth steel rollers to reduce it to a meal, which may be readily separated from the husk. In the feed spout to the rollers the malt passes a magnetic separator—this is simply a piece or pieces of magnetised steel which collects any small pieces of iron accidentally present, as these would damage the roller. The ground malt or grist is then passed on either direct to the mash tun, or more frequently to an intermediary vessel known as a steel smasher. This latter is a cylindrical vessel set horizontally containing agitators, and is charged with hot liquor (*i.e.*, water) at a temperature of 160 degrees to 170 degrees F. In this the malt gets a preliminary mashing and passes on to the mash tun, a large circular vessel generally of oak, fitted with a perforated false bottom, and having a vertical shaft, to which are attached arms and rakes arranged horizontally, which keep the contents of the tun in motion. The same shaft carries another set of radial arms, tubular and perforated, known as the “sparger,” through which water is supplied for washing the malt (“sparging”). The mash tun is fitted with “underlets” for the admission of water below the false bottom, and draw-off pipes for running off the “wort” when ready for boiling. When all the grist has been run into the mash tun, the temperature is taken and raised if necessary by hot water run through the “underlet” to 140 degrees to 150 degrees F., which is about the temperature required. The mash tun is now covered and the contents allowed to remain about two hours. It is during this time that the chemical change of the starch into maltose and dextrin takes place.

The proportion of water to grist is between 2 and  $3\frac{1}{2}$  barrels (72 to 126 gallons) per quarter of malt.

The “wort” is now drawn off, and the exhaustion of the malt finished by “sparging” with hot water through the perforated arms previously mentioned.

*Boiling*—The “wort,” cleared by running through the spent malt (brewer’s grains), flows either into an “underback”—a vessel placed below the mash tun—or direct into the copper. In the former case, care has to be taken not to allow the temperature to fall appreciably. The copper is a metallic vessel heated either by fire heat, or by steam pipes, in which the “wort” is boiled for from two to three hours, and it is during this process that added saccharine matter, if any be used, is introduced.

The hops, too, are added to the "wort" during the boiling in varying proportions, according to the character of the beer required. Ten to 20 lbs. of hops per quarter of malt in the "wort" may be taken roughly as the proportion. The hops are not inserted all at one time, but gradually, as the boiling proceeds, a final dose being used just before the completion of the boiling, in order that some of the aroma may be retained.

The hops in beer, besides giving it its peculiar flavour and aroma, serve to precipitate certain nitrogenous compounds, to assist in clarification, to preserve the finished beers, by the antiseptic properties of some of the hop constituents, and to act as a filtering medium to the wort.

*Cooling.*—From the copper the boiled wort passes into an iron vessel, known as a hop-back, which is fitted with a false bottom of perforated gun-metal plates, and on these the hops settle down to form a filter bed, and the wort is allowed to run into the cooler, a shallow tank exposed to a cool current of air. This permits of aeration and causes a more vigorous fermentation; at the same time there is a deposit of hop and albuminous matter, known as "cooler sludge" or "cooler grounds." As soon as the temperature has fallen to between 130 degrees and 140 degrees F., the wort is passed over the refrigerator—a series of copper pipes through which cold spring or well water is circulated, and the temperature further reduced to 58 degrees to 60 degrees F. for treatment in the fermenting vats or tuns.

In Germany, where bottom fermentation is adopted, the temperature of the wort has to be reduced to about 40 degrees, and this is done by passing water that has been reduced by a cooling process to 32 degrees through the lower section of the refrigerator.

*Fermentation.*—This is a chemical action by which the sugar in the wort is converted into alcohol and carbon dioxide. The material used in brewing to produce this action is known as yeast. Yeast is a vegetable organism, consisting of a number of microscopic round or oval cells, which multiply either by budding or fission (*i.e.*, cleaving or breaking up into parts). Fermentation is generally complete in two or three days, and the process is as follows:—

The cooled wort is run into large wooden vats, called fermenting tuns, containing "attemperators," *i.e.*, coils of pipes

for regulating the temperature by the circulation of either warm or cold water through the coils. This question of temperature is a very important one during fermentation. The yeast must be growing, and if the temperature be allowed to fall below a certain point, growth is checked, while anything approaching the temperature of boiling water destroys the organism. When a portion of the wort has been run in, the yeast is added in the proportion of 1 to 4 lbs. per barrel of wort, according to the quality of the beer required, strong beer requiring more yeast. This process is known as "pitching" the wort. The rest of the wort is then run in, the temperature being at this time 60 degrees F., rising by the action of the yeast to 70 degrees at the rate of 1 degree in six hours, the rate of increase being regulated by the "attemperators" if the action of the yeast fails to maintain or exceeds this rate.

In about 48 hours after "pitching" the attenuation, *i.e.*, the fall in the specific gravity of the liquor, will have reached about one-half—from 1.050 to 1.025—owing to the conversion of the maltose into alcohol and carbon dioxides, the fermenting liquid is skimmed to remove a frothy mass composed of hop resins, albuminous compounds, bacteria, and the like, which have come to the surface. A further skimming takes place later on, and the yeast so removed is placed in troughs for future use.

When fermentation is sufficiently complete the beer is allowed to remain quiet for a day or two to settle or cleanse, the last head formed being allowed to remain to shield the beer from the atmosphere and prevent the escape of carbon dioxide. This last head, consisting for the most part of old and dead cells, is cleanly skimmed and the beer drawn off—or "racked" into the trade casks. After standing for another period of a few days it is "fined" by the addition of a preparation of isinglass—or sole and eel skins—according to the beer under treatment, isinglass being used for light beers and fish skins for the darker.

The preparation of these finings in a large brewery is quite an important branch, the isinglass and fish skins being dissolved in stale beer in large vats, the beer being previously sterilised. Dilute sulphurous acid is sometimes used instead of stale beer.

I have only described one method of freeing the beer from

yeast after fermentation—the “skimming” process—but others are also used. The “Burton Union” system consists of running the beer with the yeast into casks or “unions,” holding about four barrels each. These “unions” are fitted with “attemperators,” as mentioned in connection with the fermenting tuns. Into the bung-hole of each union is fixed a curved pipe discharging into a common trough.

The fermentation proceeds in these vessels, and the yeast rising flows over through the pipes into the troughs. After the fermentation is completed and the yeast ceases to flow over, the pipes are removed, the vessels bunged up and the beer allowed to settle.

The advantages of this system are the thorough separation of yeast, due to the moderate size and shallowness of the vessels, the exclusion of air during the cleansing, and the fact that the use of attemperators in the fermenting tuns is not essential, the beer being run into the unions as soon as it has reached 70 degrees F.

In giving you a short list of technical words I mentioned dextrin. It is the presence of this in the beer which causes a secondary fermentation in the cask, aerating the beer and keeping it in good condition. The carbon dioxide evolved imparts to the beer its characteristic effervescence, and at the same time serves to exclude air from the cask. In order to maintain these conditions I believe a reservoir of liquid carbon dioxide is sometimes connected to the casks, which also serves instead of a pump to raise the beer from the cellar to the bar.

Now, what is the fire risk of a brewery? Not great—as the current rates would suggest. Defects in the construction of the copper furnace and flue sometimes give trouble, whilst the malt mill always presents possibilities, and explosions of malt dust are not uncommon.

With regard to maltings, which very generally form part of brewery premises, more careful attention is required. The old-fashioned kiln with its tunnel stoke hole and hot-air chamber behind, the floor of the latter being covered with three or four inches of malt-dust, culm, or chives, whichever you like to call it, is gradually being superseded, in large maltings, by the modern big kiln with two or more furnaces and a central hot-air shaft. But the old style still obtains in most breweries, and you will generally find the risk of hot coals being raked back into the dust chamber, the desirable brick

fender being absent. The night-shift comes on, having done himself very well at the neighbouring hotel, and makes up the fire vigorously, determined that it shall not go out. It doesn't—till the greater portion of the premises is down.

I must say, however, that this culm or chives is now cleaned out more frequently than of old, as the experienced green-keeper of the local golf club knows its value for the putting-greens, and is willing to pay a good price for the stuff.

The screening and cleaning plant, as indicated in the Granaries Tariff, also furnishes a certain measure of risk, now that power is more generally used.

### DISTILLING.

With regard to Distilling, I propose to deal only with that branch which includes the production of more or less drinkable liquids containing alcohol.

Originally the raw material used was *wine* made from the juice of the grape by fermentation. Pure brandy is now and always has been so made, but other spirits are obtained from the sugar and starch contained in a variety of natural products, but mainly in grain and potatoes.

As you probably all know, the process of distilling consists in gradually raising the temperature of a substance, solid or liquid, until its component parts become separated and vapourised, and are so passed off through a pipe provided for that purpose into a condenser or cooling chamber (where the vapour becomes liquified), and thence to a receiver. As the various parts of the substance under treatment vapourise at different temperatures, the vapours as they are condensed can be collected in separate receivers. Thus, if spirit, or alcohol, is being distilled from a liquor containing only a percentage of the spirit, the whole will be first run off into the still and the temperature gradually raised. As the spirit vapourises at a temperature lower than water, the spirit vapours will come over first and be collected in one receiver, and the remaining liquor in the still may be further heated and distilled, or otherwise disposed of, if it contain no ingredients worth separating.

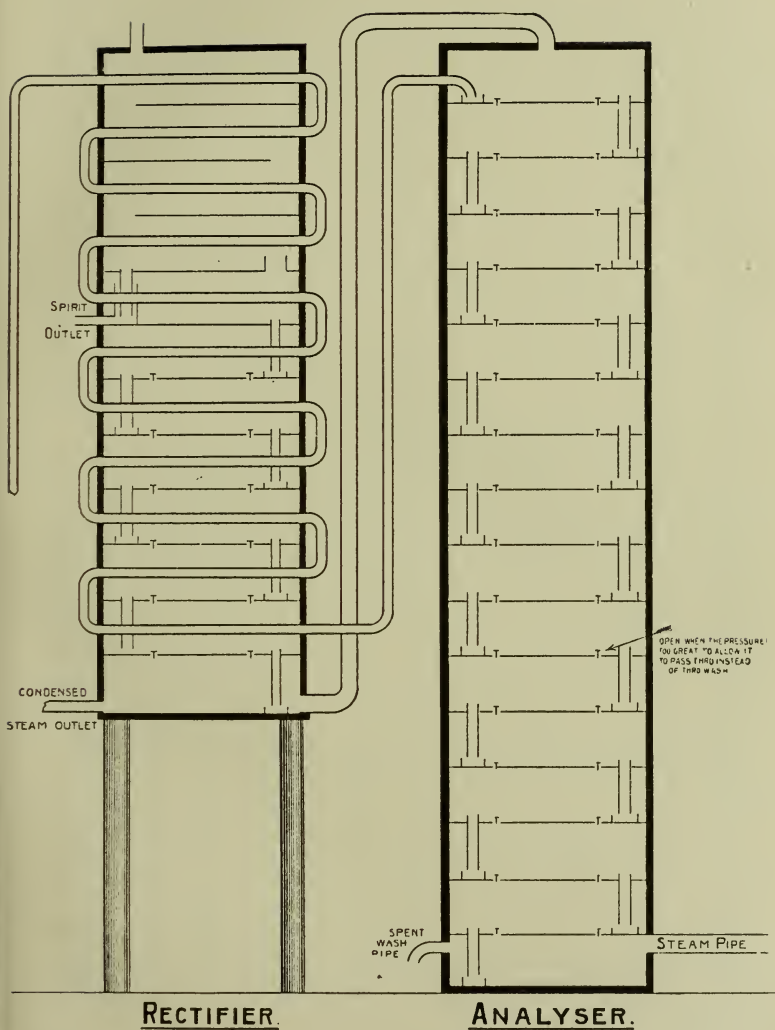
Brandy is, as I have said, distilled from the fermented juice of the grape, and it is very little made in this country. It has a natural flavour derived from the fruit, which varies according to the district in which it is grown.



Before going on to the consideration of other kinds of spirits, such as whisky, gin, commercial spirit (*i.e.*, alcohol), etc., I think a description of the two rival forms of Still will help us along somewhat. We will take first the simpler one, viz., the pot still. The form of this you probably know very well. It is a large copper vessel with a dome top, from the centre of which the delivery pipe issues, being carried in a downward direction with a gradually reducing diameter, and continued in the form of a coil, passing through a cold-water tank, which condenses the vapours into a liquid. It is heated by direct fire heat, and has a capacity of 2,000 gallons and upwards. The patent still, or, to give it its full name, Coffey's patent still, is a much more complicated affair. In the first place, it is steam heated, and generally consists of two columns, known respectively as the analyser and the rectifier. Each is divided into a number of horizontal sections by perforated copper plates, in which are fitted short pipes to allow the liquid to pass downwards from section to section.

A pipe enters the rectifier at the top and passes across and between each of the copper plates—the bends of the pipe being external to the column—and leaves at the bottom, being then carried upwards and entering the top of the analyser, discharging on to the top plate therein. The liquid to be distilled, called by the distiller “wash,” is pumped from a receiver through the pipe I have just mentioned into and down the analyser, meeting a supply of steam which enters this column at the bottom, and passes up through the perforations in the plates already mentioned. The spirit in the “wash” becomes vapourised and passes with the steam through an outlet pipe at the top of the analyser, and enters the bottom of the rectifier, where the temperature begins to fall owing to the passage of the cool wash through the wash-pipe therein. The steam, requiring as it does a higher temperature than spirit to be converted into vapour, naturally condenses first and gravitates to the bottom, passing out through a pipe to the receiver, and can again be passed through the still if any traces of the spirit remain in it.

The spirit vapour passes to the upper portion of the rectifier (which is somewhat differently constructed to facilitate condensation and collection of the spirit), where the temperature is lowest owing to the cool wash entering at this part.



## WHISKY.

Whisky is a spirit distilled from barley which may be entirely or partially malted. I have mentioned that alcohol is produced from starch by fermentation, but that it is necessary to first convert the starch into maltose by the action of diastase in the mash tun, and, further, that the diastase is formed in the barley during the earlier stages of malting, *i.e.*, the growing stage. Malted barley contains more than sufficient diastase to convert the starch therein contained into maltose, hence the addition of some unmalted barley in some whiskys. Scotch whisky is generally made from malted grain, while Irish is distilled from a mixture of malted and unmalted.

The malting is carried out in a similar manner to that for brewing, till the drying or kilning stage is reached, when the malt is dried over peat fires. This it is that imparts one of the characteristic flavours to whisky.

The dried malt is crushed and washed with hot water as in a brewery, with such slight alteration as shall insure more maltose and less dextrin, as the second fermentation in the cask which beer undergoes owing to the dextrin therein, is not required for spirits. The temperature in the mash tun is somewhat higher than required for beer, starting at about 160 degrees F. and rising to about 185 degrees at the third mashing. The wort is separated from the grain and cooled by refrigerators as quickly as possible to a temperature of 70 or 80 degrees F., and fermentation is started.

The spent grain, known as "draff," is disposed of for cattle food.

The fermentation is carried on at as low a temperature as is practicable owing to the fact that by doing so fewer by-products (fusel oil and other higher alcohols) are obtained.

You will notice a difference in this stage of distilling, from brewing, *viz.*, the absence of boiling. As the wort for distilling is not kept, but simply passes on to the still, sterilisation by boiling is not necessary.

Brewer's yeast is used for fermentation, and must be in as pure a condition as possible. It is left in the wash and fresh yeast used in each fermentation. The wash now contains from 10 to 12 per cent. of alcohol, and is passed on to the stills for separation.

Pot stills are worked in pairs. The first, or "wash still," is larger than the second, and may contain 4,000 gallons and upwards. It is fitted with agitators to prevent the solid matter settling and charring on the bottom. A small quantity of soap, tallow, or rectified paraffin is sometimes added to prevent frothing. The distillate from the first still is known as "low wines," and the residue in the still as "pot ale." The latter contains a very small (about 1) percentage of lactic acid, which is recovered and used as a substitute for acetic acid and tartaric acid in wool dyeing. Otherwise the residue is valueless.

The low wines, being poor in alcohol, are next redistilled in the second or "spirit" still, which is smaller than the "wash still," and may contain from 2,000 to 3,500 gallons, and has no stirrers or agitators. The products from this still are divided into three fractions, viz., "fore shots," "clean spirit," and "feints."

The first and third fractions are impure, and are added to the next charge of "low wines" and again distilled. The second fraction or "clean spirit" is new whisky and is from 12 to 50 over proof. It is reduced to a uniform level of 11 O.P. It may not be retailed at less than 25 U.P. The impurities in "fore shots" and "feints" consist of fatty acids (probably from the soap used) in the former, and higher alcohol in the latter.

The residue left in the spirit is called "spent lees," and is run to waste.

The flavour of whisky is derived to some extent from impurities which remain in small quantities after the passage through the second still—furfurol and fusel oil.

### GIN.

This is a spirit prepared from a mixture of malted and unmalted grain, but first distilled in a patent still and redistilled in a pot still with various flavouring matters added, such as juniper, orris root, liquorice root, cinnamon, and others. These yield essential oils which distil over with the spirit. A little salt is added, as it assists in the extraction of the flavouring matters. Sweetened gin or Old Tom is produced by adding a certain quantity of sugar dissolved in a small quantity of water.

## ALCOHOL (COMMERCIAL SPIRIT).

Strictly speaking, alcohol is not a potable spirit, but it is used largely for adulterating such spirits and also for fortifying certain wines.

It is prepared from many saccharine materials, including potatoes, turnips, maize, and molasses. The conversion of the starch into sugar is usually effected by the action of the diastase of malt, only a small percentage of which is necessary, —in the case of German spirit made from potatoes, 5 per cent. of the weight of the potatoes used being sufficient.

The mashing and fermentation is carried on as described for whisky, and the wash is distilled in stills of the Coffey type.

The rude spirit resulting from this process is diluted with about an equal quantity of water—more or less according to the percentage of fusel oil—and filtered through wood charcoal packed in columns, three feet in diameter, and 7 to 30 feet in height. The purification of the spirit by this process is partly mechanical—by absorption—and partly chemical—by inducing oxidation. The filtered spirit is again distilled or rectified, giving as a result, in the case of potable spirit, about 45 per cent. of alcohol of various degrees of purity, 37 per cent. of which being first-quality spirit, known as “silent spirit,” from the fact that it affords no indication of its origin. This is the spirit which is used for fortifying wine, and which is flavoured for consumption as brandy and other potable spirits. The less pure percentage is used for burning, for the preparation of vinegar, and for certain technical manufacturing processes.

I do not propose to deal with other forms of distillation, many of which are separate and distinct businesses in themselves, and each of which would require an evening to itself for any degree of consideration, and I will conclude by remarking that the chief risk in distilleries is the alcohol itself. Absolute alcohol gives off an inflammable vapour at 51 degrees F. and proof spirit at about 75 degrees F., so that the arrangement of fires and naked lights requires careful observation.



# MODERN MARINE UNDERWRITING AND ITS FUTURE.

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By E. F. NICHOLLS

(Underwriter, London Assurance Corporation).

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*A Paper read before the Insurance Institute of London,  
10th December, 1912.*

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It has often been a matter of remark in shipping circles that the general public in times past appeared to take so little interest in the enormous extent of the relation borne by shipping to the commercial life of this country. There are signs, however, that the whole subject is to-day better understood by the man-in-the-street than it ever was. And I believe he sees clearly that, without an adequate fleet to protect our shipping, our commercial supremacy in the oversea carrying trade is in the greatest jeopardy. With any loss of commercial supremacy, the decline in volume of Marine Insurance business goes hand-in-hand. I am glad, therefore, that the proposition which I have been asked to introduce to you to-day is one which can be said to have a certain interest for every one of us. The title of my paper is

“ MODERN MARINE UNDERWRITING AND ITS FUTURE.”

I would observe with some satisfaction that my subject to-day is defined by the word “modern,” so that there is no occasion for me to dig into history to any extent. Now this is rather fortunate both for you and for me, because Marine Insurance is believed to be the oldest known form of insurance, and so to trace its history would require volumes; and, in fact, many able works have been written upon the subject. However, the word “Modern” leaves me with rather a free hand, but the question is—Shall I begin 15 or 20 years ago or when?

Finally, I decide to make use of the title as meaning Marine Insurance in the present year, for, amongst other reasons, the year 1912 has been, and continues to be, one of the most remarkable of underwriting years ever known; and at the end of my paper I propose to dip ever so lightly into a slight forecast of the future.

Now, the modern Marine Underwriter has to deal with a vastly different set of problems to those which confronted his predecessor of even very few years ago, but the necessary qualifications remain much the same. To be successful he is called upon to exercise an enormous amount of judgment, he must always be discriminating, and he must have plenty of nerve, plenty of patience. He has to know the good and bad seasons of the year all over the world, the good and bad ports, good and bad shipbuilders, shipowners, and types of vessels, and whether a steamer, according to her capacity and dimensions, is suited to carry a heavy cargo or not. He has to study world politics so as to be able to put a proper value upon war risks; in fact, there is hardly any subject upon which he can afford to be ignorant or indifferent. In reality he has now, *as always*, to be a general compendium of knowledge. I say "*as always*," because I have the risk book of the London Assurance Corporation for 1723 by my side at my office, in which I find that the underwriter of those days fixed the premiums for Life as well as for Marine business. As to the general knowledge, I know you will agree with me that it is of no use even trying to be an underwriter if, when you are offered a risk from London to East London, you reply, as an underwriter actually once did, that you must refuse the business because you never write craft risks on the Thames; or again, as another underwriter, when a risk on coolies from Calcutta to the West Indies was placed before him, stipulated that they must be packed in tin-lined cases.

I feel sure that contemporary Managers of Fire Offices will agree that to win success they have to exercise quite different faculties from those of the Marine man; because (on the most important point—the premium to be charged for the risk run) they are so enormously assisted by tariffs that the primary difficulty in Marine or any other insurance is at once eliminated for them. In our Marine business, however, there are extraordinarily few tariffs or agreements; and those that exist are not

invariably well kept or maintained. Then, again, the Actuary is similarly assisted by his mortality tables, etc. The Marine Underwriter, speaking generally, has to make a price or rate for probably 90 per cent. of all the risks he sees—in fact, he is much more like a bookmaker than anything else, and the original supposition is, of course, that the rate charged will in each case leave a margin of profit over a series of similar risks taken over a series of years, and that the rate is based upon actual experience. But it so frequently happens that the underwriter of to-day has to make a price without any actual experience to guide him—such as of a new port being opened, or of a new style of vessel being employed, in both or either of which cases he may have to wait for years to have any adequate statistics to guide him, and may, perhaps, be living in a fool's paradise. All at once, a loss happens, and he discovers that his rate is possibly 50 per cent. lower than it should have been in order to ensure even the smallest margin of profit. The loss of the "Titanic" is the best example that could be found of this statement. One observation I should like to make about that loss—the greatest that has ever overtaken the world's Marine Insurance market—is that there were no failures caused amongst underwriters, nor, as far as I am aware, could it be said that any of them were crippled thereby. Contrast this with what occurred in the world's Fire market after the greatest fire disaster in history, and I think you will agree that underwriters have by this fact conclusively proved their prudence.

The very title of this paper leads inevitably to the reflection that the underwriting of bygone days has been in present times shorn of much of its profit-earning character by regularly increasing competition, which has to-day developed into what can be fittingly described as a race for premium on the part of all concerned, those principally implicated in such a pursuit being, of course, brokers and underwriters. It cannot be too strongly urged that as regards Marine Insurance, however carefully conducted, *Premium* is very much more distant from profit than is the case with either Life or Fire Insurance. I know of many cases of heavy payments being made for losses on policies *effected* as long as ten years before the claims were presented for settlement, and even at the moment I have in my mind a total loss by collision, which is the subject of litigation in American Courts, upon a policy effected in 1907, which will, in all probability, have to be paid by the Underwriters who then

wrote the risk. So that any arbitrary method of placing a fixed percentage of premium to reserve to wind up outstanding claims is likely in frequent cases to prove very disappointing. I merely make this observation because I see in the accounts of some Offices who have acquired Marine Companies with which to form a Marine Department, that a fixed percentage of the Premium Income is stated in the accounts to have been reserved to wind up the claims on the year's account closed to date. The percentage of such reserve to premium required in reality varies absolutely with the proportion of Time or Hull Premium to the total business done. What is rather surprising in the accounts referred to, is that in some cases the standard of reserve is fixed at the same percentage as that which experience has proved to be necessary for the similar closing of a Fire account; whereas, actually, Fire and Marine businesses are totally dissimilar in this, as in almost every other respect; and, in practice, even a small increase in Hull premium taken will in a very few months make itself felt by a corresponding increase being needed in the percentage required for the winding up of the year's account.

Comments are frequently made in the Press and by Chairmen of Companies at their Annual Meetings upon the folly displayed by Underwriters in not combining for the common good. Now, inasmuch as the principal form of combination is by means of tariffs, I propose to show that as far as regards Hull insurances, the premium on which forms a very large proportion of most Marine accounts, tariffs are an impossibility. In the first place, the premiums on Hull risks are based upon actual results of closed years, so that when an ownership has produced many or heavy claims, his rates are raised, and (in other times than the present, when the increased cost of repairs has made it an absolute necessity for all Hull rates to be increased) it frequently happens that an owner whose fleet has gone free of claim, expects, too often successfully, to have his rates reduced. Ownerships vary enormously—one owner, by keeping up his vessels in first-rate condition and by paying good salaries to his officers, or by granting gratuities to the latter for running free from accident, commands a far better rate of premium than the man who cuts expenses fine, and who generally proceeds in an opposite manner. It would be impossible to create a tariff dealing with these two owners, who may be, and very often are, actually in the same trade with similarly built and valued vessels.

In all probability I shall be expected to make a rather extended reference to modern-day competition. In the first place, it is a matter for satisfaction that, with regard to Hull business, competition has, at the moment, been reduced to quite infinitesimal proportions. Several years of unprofitableness, or worse, have given Underwriters pause, and a recent agreement has been arrived at by practically the whole of the London market, whereby all tramp steamer rates on renewal are raised 10 per cent., or the values increased 15 per cent., both as minima, which agreement has had a most beneficial effect in ameliorating rates and conditions. But these improvements, in consequence of the increase in the cost of repairs over last year's figures (which increase is estimated at not less than 20 per cent.), do no more than place the business upon the same basis as was the case at last year's rates; so that it is necessary for the prudent underwriter, where fleets have not been profitable to him recently, to demand still higher premiums or value, or both, which I am glad to say are to-day fairly easy to obtain. The reason for this is, of course, the present boom in shipping; for owners, or, at any rate, the majority of them, being reasonable business men, are fully alive to the argument of the increased repair bill, and are able, out of their larger earnings, to bear the burden of higher rates. I recognise entirely that they are doing this cheerfully, and further, I may say that they have frequently been known to express wonder that the Underwriters had not taken such a decision sooner.

A further improvement in the state of the Tramp Hull business has been brought about by the provision in the agreement referred to of the obligatory use of the 15 per cent. disbursements clause, which reads:—

“Warranted that the amount insured for account of assured and/or their Managers on disbursements, commissions, or other p.p.i. or f.i.a. interests, other than those hereinafter mentioned, shall not exceed 15 per cent. of the insured value of hull and machinery, but this warranty shall not restrict the assured's right to cover premiums reducing freight, chartered freight, or anticipated freight to a reasonable amount; provided always that a breach of this warranty shall not afford Underwriters any defence to a claim by Mortgagees or other third parties who may have accepted this policy without notice of such breach of warranty.”



Underwriters contend that by the use of this clause two most undesirable features of Hull insurances—under-valuation and over-insurance—are eliminated. The subject, from their point of view, is so important that probably no excuse will be needed from me if I enlarge upon it. First, as to under-valuation. Let us suppose that a steamer has cost £40,000 to build—it has been the practice for owners to seek insurance upon a Policy valuation of, say, about £30,000, and to insure the balance on outfit or disbursements against the risk of total loss only; and, as the latter condition can be insured at about one-fourth of the rate charged upon the full risk insurance, it will be at once seen that a great loss of premium is thus sustained by underwriters. The effect is as follows:—Assuming that the full or all risks insurance rate is £6 per cent.—£40,000 (the proper value to be insured) at £6 per cent. equals £2,400 in premium—the Underwriters accepting the risk upon the basis of a £30,000 value only get a premium of £1,800, and have to bear the same liabilities as if they received the full £2,400, except that in case of a total loss they only pay £30,000 instead of £40,000. Now the difference, £10,000, being  $33\frac{1}{3}$  per cent. on £30,000, could, up to the date of the agreement being signed, be insured against total loss only at  $1\frac{1}{2}$  per cent., involving a premium of £150, so that the owner benefits to the extent of £450 in premium, and is as fully covered as if he put the real value upon the steamer and paid the full £2,400 in premium, instead of only £1,950. The 15 per cent. disbursements clause will in all such cases automatically raise the value of the steamer. Let us see how it works—15 per cent. on £30,000 is only £4,500, so that £34,500 will not cover him, and thus the value has to be increased until you get to the sum of £35,000 on the hull, 15 per cent. on which is £5,250, the two together making about £40,000—and the premium to Underwriters as before—

£35,000 at £6 per cent. ....	£2,100
5,250 at $1\frac{1}{2}$ per cent. ....	79
	<hr/>
	£2,179

or an increase in premium of about £230, which on the previous amount paid, £1,950, is nearly 14 per cent., and which represents the improvement to the Underwriter upon the risk in question by reason of the obligatory use of the 15 per cent. Disbursements Clause.

Secondly, as to over-insurance. It will have been noticed that several cases have recently been brought against underwriters for payment of total losses in which they have successfully pleaded over-insurance. Over-insurance simply means that a vessel is worth more to the owner at the bottom of the sea than afloat, and this to the unscrupulous owner is a distinct inducement to allow a vessel to sail in an unseaworthy condition, to the danger of losing the lives of the crew, and, of course, to the detriment of Underwriters. Scuttling, in time past, has not been entirely unknown, though it is of course exceedingly difficult to prove. Having commercial morality sincerely at heart, and also, I may say, for their own protection, Underwriters are now insisting upon this 15 per cent. Disbursements Clause, by which means they believe that with the small amount which an owner can now place on Total-Loss-only terms—*i.e.*, at the cheap rate—he will have no inducement to lose his ship. Over-insurance at the all-risks rate is too expensive for him, and Underwriters who were offered an over-valuation on a hull would be at once suspicious of the risk. It will be seen immediately that the 15 per cent. clause marks a distinct step forward in Underwriters' favour, and over-insurance will by this means in all probability be entirely stamped out. Further, with increased values thus attained, the chance of having to pay for a constructive total loss is greatly reduced. A constructive total loss means—not going into technicalities—that where the expenses of salving a vessel which has been ashore, and of repairing her, exceed or equal her value after she has been repaired, a constructive total loss is in existence, and underwriters have to pay as for an absolute total loss. The earliest known example of a constructive total loss was that of the Ark. I have always thought that the expense of floating her after the waters had subsided must have been considered prohibitive, and so she was left there—who were the underwriters, Biblical history testifieth not. Speaking of the Ark reminds me of a rather amusing paragraph I once read in an evening journal, thus:—

“A Munich paper has been searching the records of history to discover who were the first mountain-climbers. It gives the palm to Moses for his ascent of Mount Sinai, and rules out Noah for his ascent of Mount Ararat, because he made it in a boat.”

With regard to competition on cargo business, the state of affairs is also satisfactory, but only in some respects. Competition for this class of insurance begins amongst merchants or bankers, from whom brokers obtain orders to get the lowest rates compatible with good security, not always, I regret to say, even with this last provision. Brokers, of course, compete with one another, and from them the scene is transferred to the Underwriters themselves. It must be clear, therefore, that there is likely to be a keen struggle for the best class business, and unfortunately owing to this, it turns out that not infrequently the best class business is by no means the best-paying business. Then there is the competition between London and the Continent. The great centres of Marine Insurance upon the Continent—Paris and Hamburg—enjoy special advantages for keeping up rates upon their own native business, and, as a rule, it is only where an enterprising London broker steps in that the foreign Assured is tempted to leave his native market for the benefit of a reduced rate, and generally even then he remains insured at home and gets the reduced rate from his native Underwriter. In Paris, of course, competition is vastly curtailed, in that there are only eight brokers allowed by law to ply their calling, and in Hamburg the Underwriters, and the Assured too, for that matter, have the advantage of a fairly exhaustive tariff. In London, even amongst the Companies, although very few tariffs are in operation, there are, of course, a certain number which are subscribed to and maintained excellently both by Companies and by Lloyds' Underwriters. The weaknesses, however, of Marine tariffs are, firstly, that it has always been found impracticable to prescribe or carry into operation any penalty for breach; and, secondly, that in endeavouring to get a general agreement Lloyds' Underwriters almost invariably desire to make a provision that their tariff rates shall be a fixed percentage below the rates to be charged by Companies. The reason for this is obvious. In the case of an agreement arrived at with differential rates it has a disastrous effect from the point of view of those who would like to see many classes of business standardised as to premium. Merchants who have done their insurances at Lloyds' possibly for generations, accept the lower rates current there, and other firms, their competitors, in which there are partners possibly Directors of Insurance Companies, or who for generations have placed their business there, are asked the higher rates by those

Companies, which they are, through competition, unable to afford to pay, and thus such an agreement soon comes to an untimely and inglorious end. Lastly, in connection with latter-day competition, I feel bound to comment upon the latest phase of the Marine situation in consequence of the acquisition of Marine Companies by Fire Companies desirous of possessing a Marine Department. I know of one such Fire Company which has had for several years agents in a far-off city of the world, agents who had for many years longer represented another Office in the Marine branch. The Fire Company acquired a Marine Office and promptly served upon the agents referred to an instruction to place all their Marine business with their new Department, and I know as an absolute fact that no inquiries were made by that Fire Office as to whether the Marine business of the firm in question was profitable or not. The Marine Office who had had that business for many years, on being apprised of the instructions of the said Fire Office, at once gave similar instruction with regard to the Fire business being placed with its Fire Department, and the final result is that the two businesses remain where they were before the incident started. The reflection which must occur to all concerned in Insurance is that here was an excellent opportunity provided for the agents to demand from their old or new Underwriters reductions in rates, quite unjustified probably, but still reductions to secure the business—which leads me to once again remark that in Marine Insurance, premium is very far removed from profit, and that at present-day rates reductions therein will at once take away the possibility of *any* profit being earned.

I have for the purpose of this paper taken out the results for the last five years of the sixteen Companies who publish intelligible statements of their Marine accounts, eighty accounts in all, and I find that thirty of these accounts resulted in a loss. This does not convey to my mind the idea that the Marine Insurance field is quite a Tom Tiddler's ground. The result mentioned was attained by trained Marine men of experience, and the argument that those not so trained could do better is naturally untenable. However, there are signs in some quarters that the attempt to make money without a trained head or staff is worth trying. I can assert, without risk of contradiction, that such experiments have been made before, and that they have invariably led to disaster.



A very fruitful topic for discussion at the moment is the question of the inclusion of war risk in cargo insurances. I may mention that by the terms of the standardised clauses for Hull Insurances war risk is invariably excluded. But, as regards cargo, it is becoming the rule for banks to decline to accept policies of insurance unless the risks of capture, seizure, detention, etc., are included. The present-day Underwriter has, for example, to gauge for himself the value of the war risk on goods insured with him for sea risk which will be passing through the Mediterranean Sea or English Channel three, or even six months, from to-day. He is obliged to do this, or probably to lose the business, for he is up against the competition of the man who is willing to accept the war risk alone, and who, making a speciality of war risks, almost invariably quotes a rate which the more cautious Underwriter, who only includes war risk together with sea risk, considers to be too low; but the latter is forced to take the lower rate, or he would lose the sea insurance to the man who gives the low war rate. I ought to explain that it is undesirable, from the point of view of the Assured, to split the risk over two policies, one for sea and the other for war risk, because by so doing there is always a danger of his falling between two stools. Moreover, it is as well to make it understood by merchants that cheap war risk insurance, placed with war-risk specialists, would inevitably result, in case of a real European conflagration, in the insurance being, in the end, anything but cheap to them, because it stands to reason that those Underwriters who were overstocked with such risks would be the least likely to meet their liabilities in the face of great numbers of captures taking place, as, of course, would be the case in the event of a naval war, particularly in our waters.

The future of Marine Underwriting depends almost entirely upon how the subject is now treated by Underwriters themselves, and Managers of Companies who have Marine Departments under their control. As I have shown, the profession of underwriting demands large experience and long education in those practising it, and it usually happens that vacancies in the ranks are exceedingly difficult to fill. This latter fact ought to serve as a warning that, from time immemorial, amateur experiments at the business have proved unsatisfactory or worse. Further, it seems that in time to come even a higher knowledge will be necessary than is now generally possessed, for the pro-



gress of new and improved means of transit is becoming very rapid. For instance, the size of ocean liners increases yearly by leaps and bounds—there are building, at the moment, at least two steamers for the Hamburg-American Line, and one each for the Cunard and White Star lines, which will be bigger than the “Olympic” and “Titanic”; and I believe that even larger vessels would have been at once put in hand for the Atlantic trade but for insufficient quay room in New York.

Then there is good ground to surmise that the internal combustion engine, still in its early days, may revolutionise ocean travel, and that oil in the near future may almost entirely supersede coal as fuel. Underwriters will need to study very carefully all the details of these innovations before fixing their premiums for the enhanced or diminished risks. The greatest lesson of the sea that has ever been taught to the whole world was the disaster to the “Titanic.” Underwriters, in common with everyone else, had come to believe that these ocean monsters were unsinkable, and that therefore the chance of their sustaining a total loss by one of them could be absolutely disregarded. However, the blow has fallen, and recent increased rates demanded and paid upon similar huge steamers show that the lesson has already borne fruit; and so in the future it may be assumed that the risk of a total loss will be adequately valued. Next, we must take into consideration the coming of the aeroplane and of the hydroplane—will they be able to carry cargo presently? Passengers they take already, and the probability is certainly in favour of them becoming freight carriers later on.

A further difficulty will arise, and will, of course, make itself acutely felt, if and when the building of vessels upon the Isherwood, or longitudinal principle, becomes usual or general—as possibly will be the case.

There has not yet been sufficient experience to make a proper comparison between the cost of repairing damage to vessels constructed on the Isherwood system (longitudinal frames) and those built in the ordinary method (vertical frames).

There would be, of course, a tendency to an increase in the cost of repairing damage to boats which are built on the new system, as the repairers would not have the necessary experience of that system to enable them to deal so cheaply with repairs as they would with a vessel of the old type, with whose construction they are well acquainted.

In dealing with the question there is an important feature for consideration, viz., whether, given two vessels meeting with a similar accident, would the damage sustained by the boat built on the Isherwood system be the same as in a boat of the ordinary type. This depends upon circumstances. In the case of an extensive damage, as, for example, where the whole of the bottom is set up, the increase in cost might not be very material. In other cases the difference might be considerable.

If, for instance, there are two boats, one "A," of the Isherwood type, and the other "B"—old type—both of which ground and sustain local damage, *i.e.*, damage confined to one or two compartments. In "B," the old type vessel, the frames being vertical, the damage might consist in each compartment of, say,

1 Bilge plate .....	cost to renew,	£25
2 Bottom shell plates	,, , ,	40
6 Intercostal plates ...	,, , ,	21
		<hr/> £86

In "A" the damage becomes more than local and is spread over a larger area. The contact with the ground forces in the longitudinal frames, which are of great length, and will also affect the plating attached to these frames. It has been estimated that given a similar accident as in the case of "B," the resulting damage to "A" might easily be:—

5 Shell plates at £20 .....	£100
2 Floors at £15 .....	30
8 Intercostals at £7 .....	56
	<hr/> £186

In the case of collision, where two vessels receive damage to side plating, "B" might receive a blow in the space between the two vertical frames, and the plating damaged by the collision might be limited to the actual spot of contact, but, in the case of "A," the contact would cause the longitudinal frames to be forced in bodily and would carry with them the whole of the plating affixed to the frames.

Another item for consideration by the Underwriter later on will be the rates of premium to be charged for the various routes which will come into existence through the opening of the

Panama Canal. I understand that the Panama Commissioners have stated that they will make good any damage which may occur to vessels passing through the Canal, so at any rate, if this be the case, there is an easy comparison in the rates now charged for sendings by the Tehuantepec Railway route. This railway, however, at the present moment, takes principally only cargo from the West Coast of North America to the East Coast of North America, and sometimes to Europe and *vice versa*. There is no doubt that many varieties of route will spring up as soon as the Canal is opened, and each of these will, of course, require careful examination before the insurance rates for the same are fixed.

So that, without any doubt, the future is full of the most interesting problems, many of which are ripe for immediate study, and others for serious preparation at all events; and I have no fear that the profession of Underwriting will in the future, as in the past, keep itself fully abreast of the times in which we live.



## REJECTED LIVES.

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*A Paper read before the Insurance Institute of Newcastle-upon-Tyne, 24th March, 1913.*

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THE responsibility of rejecting on medical examination an applicant for life assurance is sometimes considerable, and is the greater when it is remembered that such rejection is often a permanent record against, or "load" on, the life.

Our points of view must always differ, in that your standpoint is entirely financial, basing the prospect of life upon statistics, actuarial estimates and averages; mine, the standpoint of the clinician, based upon the pathological prospect.

I am aware that every "risk" must have its price, and that there are a certain number of "lives" justly rejected as uninsurable at any price, or at such an increased premium as to be not worth while to the applicant. In this class of case, the grounds for rejection are sufficiently certain, and I do not propose to include them in the subject of my discourse. I wish to confine my remarks rather to certain illustrative groups of cases which present unusual difficulties to the medical examiner, concerning which no accurate statistics are available, and in which "deferred examination," at all events at short interval, does not always aid in arriving at accurate prognosis.

Mistaken observations and conclusions based thereon unjustly condemn a certain number, and in all probability let an even greater number through the sieve who should have been rejected.

To be compelled to truthfully answer in the affirmative the question, "Has the life proposed ever been rejected by this or



any other Company?" is to place upon it a "load" not always easy to remove. It is my intention to review with you some instances in which this difficulty may properly arise.

#### TRANSITORY ALBUMINURIA.

(*Cyclic, Physiological, or Functional Albuminuria.*)

There can be no doubt that cases exist in which the presence of albumin in the urine is not an indication of disease of the kidneys, and in which the most careful examination fails to reveal any definite disease.

To quote extensively from a recently-published work on "Kidney Diseases," by W. P. Herringham:—"Those concerned in the examination of large numbers of boys, young men, and girls, whose health is apparently good, have found that in a certain proportion of them albumin may, under certain conditions, be detected in the urine. The circumstances under which this takes place may vary with the patient, though they may be constant for the individual."

The following classification is submitted:—

1. *Postural or Orthostatic Albuminuria.*—In this class of case albumin is *absent* after lying in bed or assuming the recumbent posture for two or three hours, and *present* in from one to three hours after rising. It is probably due to some disturbance in the circulation—a fall in the arterial or a rise in the venous blood pressure.

2. *Albuminuria after Hard Exercise.*—In 1888 Sir Thomas Grainger Stewart found that hard physical exercise produced albuminuria in a certain proportion of soldiers. The most important observations in this connection, however, are those of Dr. Collier, of Oxford. In February, 1906, he examined 156 healthy undergraduates who were training for boat races about an hour after they had been rowing. In some cases the urine of every member of the crew contained albumin, and sometimes very heavy clouds of albumin; especially was this the case with the head boats on the river, the probable explanation being, the harder the work the heavier the percentage of albumin. Later on the urines of the crews competing in the Inter-University Boat Race were examined, and from the Oxford crew, after rowing the full course, albumin was present in every instance, and in 50 per cent. in large quantities.

He found the same after running races, and his observations were confirmed by several medical officers of public schools, who made similar observations at his request.

Professor Holst, of Christiania, records that in examining over a hundred men after racing on snow shoes he found albuminuria in every instance but one.

Dr. Collier points out that the expectation of life among University oarsmen is exceptionally good, so that the albuminuria noticed cannot be of serious importance.

This matter was further fully discussed at the Medical Section of the Royal Society of Medicine in 1911, and Dr. Collier then added the further observations that in 1907 he took the urines of five crews, forty men, soon after they had rowed the races at Oxford. Every one of them passed albumin, and many of them casts and oxalate crystals. He also examined the urines of runners, and in all there was plenty of albumin after a race. He believed that albumin would always be found in the urine of a man who had the faculty of "running himself out."

Dr. Armstrong, of Wellington College, stated that he frequently found albuminuria in his schoolboys after a cross-country run. He had taken systematic observations on the systolic blood-pressure, and found that in those cases where the blood-pressure was lowered albumin was present, and where the blood-pressure was not lowered there was no albumin.

3. *Transitory Albuminuria* may also be due to :—

- (A) Mental Strain. Albumin may be temporally present in the urines of candidates for examination, in boys anticipating flogging, or in other forms of nervous apprehension.
- (B) Exposure to cold, as after cold bathing, etc., has been described as a cause by several writers. This condition is considered to be analogous to paroxysmal hæmoglobinurea.

In the contrary direction, albumin may be temporally absent, even for considerable periods of time, in true organic disease of the kidneys, and the recognition of such organic disease must depend upon other evidences, such as may be revealed by more detailed examination of the urine, by increased blood-pressure, cardio-vascular or retinal changes.

The terms "cyclic," "physiological," and "functional," as applied to albuminurea, have been ably criticised in a paper by Dr. Samuel West, published in the "Lancet" of January 16th, 1904, in which he concludes:—That functional albuminurea is never, strictly speaking, physiological at all, but that it is, on

the contrary, always pathological, though not necessarily renal. He further states:—

1. Albuminurea may occur as a transitory symptom in persons who, except for this symptom, may be judged to be perfectly healthy, for they appear to be so at the time and remain so.
2. But it may also occur in persons who, though they appear at the time to be healthy, develop signs of disease subsequently.
3. It is difficult to distinguish at a given time between those who will remain well and those who will not.
4. It is difficult to exclude for certain many of the pathological causes to which albumin may be due. In other words, though there may be no proof that these causes are present, there is equally no proof that they are absent, and in some cases the result shows that they were not absent.
5. Speaking generally, the larger the amount of albumin in the urine, and the longer it persists, the greater the probability of some permanent disease.
6. Continued observation of these cases shows that the so-called physiological albuminurea does not very appreciably increase the risk of life, and that this risk grows rapidly with every year of age after thirty years.

It is, indeed, generally conceded that no case of albuminuria in a person over thirty years of age should be diagnosed as physiological. In the paper above referred to, Dr. West publishes a table based upon a calculation made for him by an actuary, showing approximately the difference in mortality compared with healthy males: —

Ages attained.	RATE OF THE FOLLOWING YEAR.					
	Rate from figures given.			Rate for Healthy Males.		
30	...	...	—	...	...	—
32	...	...	1.53	...	...	1.06
34	...	...	3.27	...	...	1.11
36	...	...	3.33	...	...	1.16
50 $\frac{1}{2}$	...	...	3.70	...	...	1.97
52 $\frac{1}{2}$	...	...	2.64	...	...	2.20
54 $\frac{1}{2}$	...	...	3.74	...	...	2.43
56 $\frac{1}{2}$	...	...	7.13	...	...	2.69

It must be acknowledged, then, that there is no one symptom upon which alone we can rely, and that the clinical differentiation between the functional and the organic is difficult, yet with

proper precautions, and, if necessary, repeated examinations, it should be possible to distinguish between albuminurea which will, and albuminurea which will not, affect the patient's health and shorten his life.

### GLYCOSUREA.

Similarly, the presence of sugar in the urine is by no means necessarily an indication of true organic Diabetes Mellitus. Its presence may be due to some merely temporary functional disturbance in carbohydrate metabolism, and it is sometimes difficult to exactly estimate its true prognostic import.

The reduction of copper sulphate into the red sub-oxide, as obtains in the familiar test with Fehling's solution, does not necessarily indicate the presence of glucose, for, in addition to certain rarer substances, in women undergoing lactation the presence of lactose in the urine may effect such a reduction, and it requires certain finer tests to differentiate this from glucose. The excretion of glucose itself in the urine may at times indicate nothing more than some temporary derangement of carbohydrate metabolism or be symptomatic of conditions entirely independent of true pancreatic diabetes. In the endeavour to estimate the prognostic import, and to differentiate the causes of glycosurea, one has been accustomed to attempt some such classification as follows:—

1. Diatetic.—Due to excessive carbohydrate indigestion or alimentary fermentation.
2. Hepatic.—Due to, or at least associated with, temporary derangement or permanent disease of the liver.
3. Symptomatic.—Resulting from causes sometimes remote, such as exophthalmic goitre, temporary mental strain, or more serious organic brain disease; sometimes more proximate, such as gall stones, carcinoma, or other recognisable gross disease involving the head of the pancreas.
4. Organic.—True pancreatic diabetes.

It is commonly accepted that prognosis in glycosurea is materially influenced by the age of the subject, and although, when of organic origin, it is mainly true that it runs a rapidly fatal course in young subjects, and may continue for many years in those past middle life, yet such a rule admits of exceptions.

The difficulty of assigning to its proper cause, and therefore of estimating the true prognostic significance of the presence of a trace of sugar in the urine in an applicant for life assurance, is extremely great, and involves grave responsibility. Every one of you, however, must be familiar with instances in which the proposal has been rejected for this cause alone, and the individual so rejected has enjoyed a long and healthy life. I well remember two cases of young men who, many years ago, came to me in great alarm because they had been rejected for insurance on the ground that sugar had been detected in the urine. In both instances repeated examinations extending over some months failed to detect any further trace of sugar, and these men are now prominent citizens in robust health. A further example was the case of a middle-aged man about to marry, and who for that reason had sought to effect an insurance upon his life, but was rejected on the ground of glycosurea. In great anxiety, he wished to know if he should cancel his arrangements, which were very near at hand. It was true he had glycosurea, but knowing his dietary to be peculiar and to consist of an excess of carbohydrates, knowing him to be in every other respect a healthy, muscular man, and believing the glycosurea to be physiological and therefore temporary, he was advised to proceed with the ceremonies. The glycosurea gradually diminished, and disappeared in about four weeks. This happened four years ago; he remains perfectly healthy, and there has been no further trace of sugar detected. The fact that such cases as these have been at one time rejected may lead to an increased premium being asked, and so prevent the individual seeking further insurance.

#### FUNCTIONAL CARDIAC MANIFESTATIONS.

The differentiation between endocardial, myocardial, and exocardial conditions is not always an easy matter, and it must sometimes happen that functional derangements are mistaken for organic lesions, and the applicant's proposal is rejected or the terms so increased by the addition of years that the applicant refuses to proceed.

The relative prognostic value of actual valvular defects is worthy of some consideration; for example, the subject of an aortic regurgitant murmur would be too great a risk to accept,



but a simple mitral regurgitation may not materially diminish the "prospect of life," provided the cause be no longer existent, compensation be perfect, the other organs normal, and occupation and habits suitable.

Dilatation murmurs and haemic murmurs vary much in their significance, and may sometimes be quite temporary where their cause is capable of removal.

Myocardial degenerations are amongst the most serious heart affections, especially where due to coronary artery disease or arterio-sclerosis. There are, however, certain myocardial conditions of toxic origin, such as may depend upon excessive use of alcohol or tobacco, or may occur during convalescence from acute febrile conditions, which are completely and permanently recoverable, provided the cause be removed.

The most important and difficult item in this connection is the certain recognition of exocardial murmurs, which are often quite unimportant in considering the "prospect of life." Such murmurs are at times purely nervous in origin, so-called neurotypic, at others cardio-respiratory, and occasionally due to the slight hypertrophy resulting from athleticism.

Increased pulse rate or occasional intermittence are not always in themselves a sufficient reason for rejection or added premium. They may be due to nothing more serious than a nervous apprehension of examination, and in any case more consideration should be given to their possible explanation than is indicated by the mere record of figures on a proposal form.

#### TUBERCULOSIS.

The Registrar-General's Report for 1910 states that:—"The mortality from this cause continues to decrease, and was lower in 1910 than in any previous year. In England and Wales the deaths assigned to tuberculous affections in the aggregate numbered 51,317, or 6,247 below the average number in the previous five years—corrected for estimated increase of population. Tuberculosis was responsible for 10.6 per cent. of the mortality from all causes, and for a death-rate of 1,434 per million living, at all ages and of both sexes."

I have myself been accustomed to estimate the average duration of life in retrograde cases as being seven years. On such a basis this would give a total of 359,219 cases of tuberculosis

living in England and Wales and pursuing a retrograde course.

It is agreed among pathologists that amongst those dying from fortuitous causes at all ages who are subject to *post-mortem* examination, not less than 65 per cent. show evidences of having had some tuberculous infection of the lungs which has become quiescent or healed. This amounts to the rather startling statement that 65 per cent. of the population—more than every second person one meets—have been infected with tubercle without having known it, and have recovered from that infection by their own natural powers of resistance.

Professor Osler has expressed it in the phrases:—"The germ of tuberculosis is ubiquitous; few reach maturity without infection; none reach old age without a focus somewhere." The German saying is:—"Everyone has in the end a little bit of tuberculosis."

So Nature is curing tuberculosis every day, and because in such cases it is undetected these lives are accepted. Figures are available, and the risks are estimated. Modern methods of examination, however, detect and exclude many that might have passed muster a few years ago. I do not refer to the use of the diagnostic tuberculin tests; these would reveal also the 65 per cent. previously mentioned.

Many recognised cases now completely recover by modern methods of treatment. The cicatrix left after arrest may or may not be capable of detection. How many cases that have not only attained an "economic cure," but in which complete "arrest" has been accomplished, are permanently cured? Are they more or less liable to break down again than those who have not been infected or in whom the infection has not been detected? This raises the important question of the possibility of immunization to tubercle, concerning which there is still considerable difference of opinion.

What period of time will suffice for you as proof of permanent arrest? Will five to ten years at full work in robust health without any local evidence be sufficient?

Reliable statistics are not yet available, but it is an undoubted fact that many persons infected with tubercle—or, it being latent within them and having assumed activity during temporary depression of general health—have recovered absolutely and permanently. Are they in worse plight as to

“ prospect of life ” than the 65 per cent. referred to? Are they for ever debarred from effecting life assurance at ordinary rates for age?

Questions concerning family history are becoming somewhat obsolete, and conclusions based thereon fallacious. No child is born with tubercle—it is not congenital. The most that can be said for family history is that it may indicate fertility or non-fertility of soil, and a possibly infected environment. Infection must take place after birth, the liability being sometimes dependent upon a family predisposition or lowered resistance, but sometimes, quite independently of family history, the liability is acquired by personal lowered conditions of health.

A family history of many deaths from tuberculosis indicates predisposition to infection, lowered tissue resistance, and suitability of soil for its growth and development. A family history of many recoveries from tubercular infections would indicate unsuitability of soil and considerable power of resistance with enhanced prospect of cure. A family history of no tubercle may indicate untried virgin soil. The seed may not have been sown, the soil may be non-fertile, and the family history as good as it seems; but it may be, and sometimes is, very fertile, and some of the most rapidly fatal cases of tuberculosis one sees are those in which there is no family history of similar conditions.

#### CONCLUSION.

These few grouped examples must suffice to indicate the difficulties which present themselves to a medical examiner in attempting to correctly estimate the “ prospect of life,” and the possible hardship, or even injustice, to which a proposer may be subject when once his application for life assurance has been rejected. Business loss may also accrue to the Companies from certain of the rejected proving ultimately to be sound lives at ordinary or slightly enhanced rates, or from the proposer refusing to consider life assurance at abnormally increased premiums.

The proposal forms of most Insurance Companies require to be periodically reviewed and revised, so that the questions contained therein may be brought into closer conformity with modern knowledge.

Acceptance without medical examination, merely on the statement of the applicant, would increase the price to all. In justice to the healthy, a strict medical examination, and assessment of risk based thereon, must therefore be advocated.

My purpose has been to call your attention to certain instances in which, with advantage to both parties, it might be desirable to make more easy of removal the embargo on the life rejected.

NOTES ON THE VALUING AND INSPEC-  
TION OF MACHINERY AND MOTOR  
CARS FOR INSURANCE PURPOSES,  
PARTICULARLY WITH REGARD TO THE SETTLEMENT  
AND REINSTATEMENT OF CLAIMS.

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By A. H. SPROULE, M.I.A.E.

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*A Paper read before the Insurance Institute of New South  
Wales, 16th June, 1913.*

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IN the first part of my paper I shall deal with machines as consisting of an assemblage of some or all of the following parts:—

Bedplates and frames, shafts, cylinders and pistons, connecting rods, bearings, flywheels, pulleys, cogwheels, springs, electric conductors, insulating materials.

I shall deal briefly with the materials most generally used in the constructing of these and the effect of fire and shock upon them.

The materials most used are wood, cast iron, wrought iron, and mild steel, copper and its various alloys, alloys known as white metals, aluminium, and various electrical insulating material. Wrought iron is now almost entirely replaced by mild steel, and as the two have very similar characteristics, I shall refer to these as steel. When a higher grade of steel is meant, I shall specially mention it.

When parts are of intricate shape they are generally made from cast metal, either iron, brass, aluminium, or steel, owing to the ease with which moulds may be made in green-sand or loam for even the most intricate shapes. Steel castings, although up till recently a little unreliable, are now made of a quality of the best forged work, and at a much lower cost.

Where very heavy surface wear has to be borne, steel is generally used, with its surface specially hardened by a process known as "case-hardening." This consists in baking the parts



to be hardened in a special mixture, mainly potash products, and dipping out in cold water or oil while still red hot. The baking turns a thin layer on the surface into a high grade steel, and the sudden cooling makes this layer glass hard. The thickness of the layer depends on the length of time for which the material has been baked.

Gear wheels of motor cars are nearly always treated this way. Ball races always are. Also valve tappets and valve stem ends, cams, &c.

ALUMINIUM is now largely used in machinery where weight has to be kept low. It is not a very strong metal, and melts at a fairly low temperature. At a much lower temperature than this it becomes very weak. Consequently parts made of it are generally seriously injured by either fire or accident. When it has received a clean break it can very easily be burnt together by the oxy-acetylene flame before referred to.

BEDPLATES are geneaally of cast iron, but are sometimes built up from joists and plates of steel.

FRAMES are generally built of steel bars and plates or combinations of both. The steel is rolled to a suitable section for each particular purpose.

SHAFTS are usually of mild steel, although in many cases a fairly hard steel is now used, especially in crank shafts for high speed work such as motor car engines, where lightness is considered of great importance.

CYLINDERS are generally made from a fine grained cast iron.

PISTONS are usually of cast iron, but in high speed engines steel is often used so as to be able to get the requisite strength with lighter weight. Lightness in these is of great importance to facilitate balancing, to reduce vibration.

CONNECTING RODS of large size are usually of mild steel, but for high speed engines the very strongest steel is used, for the same reasons as in pistons.

BEARINGS are generally a shell of cast iron or other metal lined with brass or white metal. These liners may be a removable piece, but if of white metal it is often simply run into place hot, and attaches itself to the shell. Up to a few years ago these linings were almost invariably some form of brass, and for that reason they are always spoken of as "brasses." The class of brass used for this work is generally that known as gunmetal,

but sometimes phosphor bronze is used. For high speed work the bearings are often what are known as ball races, consisting of two hardened steel shells, one fixed to the frame and one to the shaft, and between these is a line of hardened steel balls, which carry the weight. Sometimes rollers are used instead of balls. This form of bearing is used for practically all bearings in motor cars except engine bearings, and even for these by some makers.

FLYWHEELS are almost invariably of cast iron.

PULLEYS used to be almost entirely cast iron. Now they are more often built of steel or out of wood.

COGWHEELS are made of cast iron, steel, brass, compressed greenhide, or wood fibre. For slow running and large wheels cast iron is generally used. Steel is used where greater strength is required. Where these wheels have to do very heavy work, as on motor cars, they are generally case-hardened, although some manufacturers prefer to use a very hard class of steel and no case-hardening. Brass wheels are generally only used for light work. They give greater silence in running than cast iron or steel. Greenhide and wood fibre are often used for pinions—*i.e.*, small cog-wheels—as they give silent running. In such wheels the greenhide or fibre is generally held between two thin metal plates. Such wheels will stand very heavy work.

SPRINGS.—Small springs are sometimes made of brass, but generally steel is used. For this purpose a special class of steel, known as spring steel, is used. Such springs are carefully tempered after being made to shape.

ELECTRIC CONDUCTORS are almost invariably of very soft copper, although brass, iron, and some patent alloys are sometimes used where high electrical resistance is desirable.

ELECTRICAL INSULATING MATERIALS are generally cotton, silk, paper, vulcanised fibre, India rubber, vulcanite, mica, asbestos, or some compound of these.

#### PRINCIPAL POINTS TO BE NOTED WHEN SETTLING OR REINSTATING CLAIMS.

When machinery is once damaged by fire, the insured almost invariably claims a total loss. This is particularly so with motor car losses.

In my experience genuine total losses of machinery by fire

are very rare, and will only occur where machinery has fallen, due to collapse of floors, or where heavy weights have fallen upon it, or where the fire has been exceptionally fierce. By proper handling, the machinery can generally be reinstated to its former value at a cost very much below the price for which it is insured, and the cost of reinstatement is, of course, all that the insured is entitled to recover.

When an adjuster suggests reinstatement to the insured, one of the first things the insured says is that it will be impossible to make the machine good again, as all the temper has been taken out of it. Nothing could be more absurd. Except springs and a few case-hardened faces, there are practically no tempered parts in any machine, and such as there are, are sure to be parts subject to great wear, and so spares are almost sure to be obtainable at a moderate cost. Case-hardened parts are easily re-case-hardened. Springs are not likely to cost much to completely replace. This loss of temper idea is particularly common in the case of motor cars, and is as little applicable to them as to any class of machinery. Cast iron parts are very liable to be cracked, particularly if water has been played on to them while hot. Fortunately, cast iron can often be burnt together at a very moderate cost. Until recently, the only way to repair castings was to mould them in sand or loam and run a stream of hot iron along the crack until the metal was raised to melting point and ran together. This was a very costly method. But with the introduction of oxy-hydrogen and oxy-acetylene welding parts, particularly the latter, broken castings can generally be very cheaply repaired and made as strong as new.

Of course, this will not apply to every form of casting.

**BEDPLATES.**—These will not generally be injured by fire, being of very massive construction. If broken they can often be burnt together.

**FRAMES.**—Steel frames can always be re-straightened and set up, and will then be quite as good as before.

**PULLEYS.**—Cast iron pulleys, if once broken, should not be repaired. When one considers the amount of damage to property and life which a burst pulley is liable to cause, it is not to the general interest of insurers to take any risks with them, and owing to the shape of pulleys, it is very likely that in burning them together, owing to unequal expansion and con-

traction, internal stresses will be left in the metal which may cause it to burst at a comparatively low speed.

STEEL PULLEYS are likely to be badly twisted by even a moderate amount of fire, and as these are very cheap, repairing is not likely to pay, except in the case of large pulleys.

WOOD PULLEYS if once badly heated, although not actually burnt, or even if water has been played on them, will probably be so twisted that they will have to be replaced. Fortunately, these are now obtainable from stock in all sizes usually met with, and are very cheap.

SHAFTS.—Straight shafts, even if badly bent and twisted, can easily be straightened up. Heavy shafting will need to be skimmed up along the journals—the part of the shaft which runs in the bearings. Crankshafts are not likely to be injured by fire, but if bent can be re-straightened, but must also be afterwards trued up in the lathe. It is expensive work turning these up, as it takes a number of settings in the lathe, but as their value is high it is always worth while. Most workshops now have special grinding mills in which crankshafts of small size can be trued up very quickly and cheaply with the greatest possible accuracy. The slight loss of diameter in trueing up will not materially affect the strength of the shaft, but it will necessitate refitting of all bearing brasses, both in the main bearings and on the connecting rod ends.

CONNECTING RODS if bent can usually be straightened and made as good as new. Refitting of the end bearings may be necessary.

CYLINDERS, being of cast iron, are often cracked by fire. These can sometimes be burnt by oxy-acetylene flame, but owing to their complicated shape, the method cannot be relied upon with internal combustion engine cylinders. I have sometimes repaired such cylinders temporarily in this way at a small cost, to be used until the arrival of new ones from the makers, but I cannot recommend such repairs as a permanent job.

PISTONS if once cracked must usually be discarded.

BEARINGS.—If these are lined with white metal this must always be renewed. This metal, when heated, but not sufficient to cause it to run, generally becomes crystalline, and so cannot be relied upon to stand if left in place under such conditions. Where the liners are of brass they will not be injured unless the heat has been severe enough to melt them. If the shaft

journals have had to be retrued, the bearings will of course need relining, as mentioned before.

**BALL RACES** or roller bearings must generally be completely renewed. They would in any case have to be rehardened, and in the process will nearly always twist a little, and as these have not usually any means of adjustment, they will not stand regrinding to truth.

**COGWHEELS** of any metal will not be seriously injured unless actually melted or broken.

**WHEELS** of fibre or greenhide will usually be destroyed, but the hubs and flitch plates in which the fibre or greenhide is held can be used over again.

**SPRINGS.**—All small springs should be replaced if once injured, but larger ones may be reshaped, and retempered unless the heat had been so intense as to alter the nature of the material. The class of steel used for this work is injured by a much lower temperature than the milder steels used for frames, gear wheels, shafts, &c. An expert can very easily say if the steel is so injured or not.

Having dealt briefly with the nature of the more general parts of machinery, I will now deal more fully with the three special classes—Electrical Machinery, Motor Cars, and Boilers.

### ELECTRICAL MACHINERY.

Every electric dynamo or motor consists of two main parts, a field magnet and an armature. One of these will be fixed and form part of the frame of the machine and the other will rotate. In practically all motors and in most dynamos the armature is the rotating part. The magnet frame usually consists of a solid iron or steel casting, but may sometimes be such a casting with a number of steel plates or “laminations” cast or bolted inside it. Fixed to this, in spaces provided for them, will be a number of coils of insulated copper conductors. The armature consists of a core built up of very thin iron or steel laminations, securely mounted to the shaft or frame. These laminations are circular in shape, and when mounted the whole looks something like a solid pulley with a large number of longitudinal slots round the periphery. Into these slots are placed the coils of insulated conductors, which carry the main current in the machine. On some machines there is also an important part



known as the commutator. This consists of a large number of copper bars arranged in a circle, much as the staves of a barrel, all carefully insulated. This is mounted on the shaft, and each bar is attached to its proper coils on the armature.

We may, then, divide an electrical machine into three parts, the carcase, the coils or windings, and the commutator, or other collecting device. The carcase is rarely much damaged by fire. The shaft and bearings in it can be treated as explained earlier for such parts. The rest of the carcase merely needs cleaning up and repainting. Sometimes with small machines the lugs cast on the frame to take the holding down bolts get broken off, but these can be easily burnt on again. The windings are the part which suffer most severely, and are at the same time most costly to repair in Australia.

At one time the windings of a machine were put on the armature by simply laying the conductor across the core, down under the core end, and back underneath. This form is called "string wound." If there was a fault at any point in the winding it was necessary to start at the point the winding had finished and unwind to the fault. But in all modern machines each coil is wound to shape on a former, and then bound with tape to the form of a solid rod bent to the shape it has to take on the armature. These "form wound" coils are then each laid in position on the armature, and in the event of a fault occurring at any point they can all be lifted off, the faulty ones repaired, and all laid back in position. These are known as "form wound" machines, and are obviously much cheaper to repair. Machinery is used in forming these coils, and the cost is relatively low. Agents for machines often have such coils in stock ready for use, and in such case the windings of a machine can be reinstated very cheaply.

When coils have to be locally made, the cost has up to the present been very high. There has not been sufficient volume of business to justify local firms in buying the necessary machinery, and the coils have to be wound by hand. This is very costly, and although it will pay in the case of a large machine, it has been as cheap to scrap the machine, unless new coils could be obtained from the makers abroad. However, local firms have improved their methods immensely of late, and many machines can now be saved which a short time back had to be scrapped. The commutator or collecting device is seldom

much damaged by fire. The insulating materials used in these are generally mica, asbestos, or some compound of these, which will not be injured by heat, so that unless the copper is actually melted the commutator only needs cleaning up. Even when damaged it is very rarely that the commutator is not worth rebuilding locally.

With regard to the switch gear, etc., used as accessories to electric machines, a fire very often means a total loss. All this gear is mounted on either slate or marble slabs, generally marble, and these slabs break up very quickly with heat, and the switches and accessories being mainly of light materials are very easily completely destroyed. If electric plant is not actually touched by fire, but water has got into it while the current is turned on, very serious damage may be caused by the current breaking through the wet insulation, etc. But if the current is turned off no serious permanent damage will be caused, as the water may be dried out, and will leave the machine as good as before. This drying out is most easily done by passing a very low pressure current through the windings. This will cause sufficient heat to dry the machine out without injuring it. If current is not available, it is done by placing small stoves or heaters near the machines.

Electric accumulators or storage batteries are very easily damaged by heat. The cells being of glass are easily cracked, and the plates in the cells and top connections being of lead are easily melted. These cells contain, with the lead plates, a solution of sulphuric acid, and this acid, when liberated, may do very serious damage to other goods.

When being charged, these accumulators give off a small amount of hydrogen gas. The rate at which such gas is given off furnishes some indication of the state of charge of the cell. I once heard it stated in connection with an Insurance risk that owing to the highly inflammable nature of such gas these cells would be very dangerous in any ordinary building. As a matter of fact, the amount of gas given off is very small. As stated above, the amount of gas coming off furnishes an indication of the state of the cell. It is a recognised system of testing for the battery attendant to go to each cell and hold a smouldering taper over it. If the cell is "gassing" freely, a tiny "pop" is caused. If there was any dangerous quantity of hydrogen given off, this practice would hardly be followed.

## MOTOR CARS.

Apart from the purposes for which they are used, it is convenient to group motor cars under the three following headings, according to the power system used on each :

- (a) Steam Cars.
- (b) Petrol Cars.
- (c) Electric Cars.

STEAM CARS refer to cars in which an ordinary steam engine and boiler or steam generator are used. The fuel used is generally kerosene or petrol, but some lorries use coke. Petrol is not used on many of these cars at the present time, except for starting. For this purpose a small tank holding from one to two gallons is employed. From a fire risk, I consider these cars are very safe. Many people think the risk is bad owing to the presence of flame at the burner. But kerosene is not nearly so easy to ignite as petrol, and if lighted is much more easily put out. I have known of several cases of these cars catching fire, but have not met a case where the damage exceeded a few pounds.

The heavy losses incurred by fire on motor cars are, in my opinion, nearly always due to the presence of a considerable quantity of petrol, which ignites so suddenly and burns so fiercely that hardly anything can save the car from very serious damage. From an accident standpoint, I also consider steam cars are very good, as the control is very perfect. In these cars, one would expect the greatest source of trouble to be in the steam generator or boiler. Where the boiler is of the multi-tubular type this is so, but where a generator of the coil type is used my experience has been that breakdowns are extremely rare. In fact, although I have had to deal with a large number of such cars, I have only met with or even heard of one such case. I have seen such a coil, through neglect of attention to regulating apparatus, become white hot, and not yield, and in another case I saw tubes expanded to over three times their original diameter without yielding. In the engine itself I think the risk many times less than in an oil-driven engine. There is no gear-box to give trouble, and the strain on the back axle is much less severe than in an oil-driven car.

PETROL CARS refer to all those cars having an internal com-

bustion engine—a simple gas engine—operated by gas formed by vaporising petrol. This is by far the most generally used type of car at the present time, and is, unfortunately, by far the most liable to fire loss. The spirit used is a petroleum product, with a specific gravity often as low as 0.7, and is extremely volatile. When agitated the flashing point of this class of oil or “spirit” is right down to freezing point. Not only is such spirit very volatile, but owing to its richness in hydrogen the gas given off by it is very easily ignited, and also the rate of propagation of flame from the point of ignition is very great.

Then, again, we have two things on the car which can easily ignite such gas. There is the exhaust pipe from the engine, which is often very nearly red hot. Then there is the possibility of an inlet valve in the cylinder sticking up or becoming displaced from its seat by various causes. In this event, when the charge in the cylinder is ignited, it fires back under the valve into the induction pipe and carburettor, and ignites the spirit in the latter. The quantity of spirit in the carburettor at one time is small, and if the supply is turned off at the tank immediately, very little damage should be done, unless there has been a leakage from the tank or pipes, causing an accumulation of petrol or petrol gas under the floor of the car. There is a third probable source of ignition of any loose petrol, and that is, a stray spark jumping from some part of the high tension ignition system on the car.

I remember one case in which the insured, in making some slight alterations to his car, moved a high tension coil from its safe position on the dashboard, and put it under the seat near the end of his petrol tank. The very first day he took the car out it ignited and was damaged to the extent of £40. Probably he went out with a full tank which flowed over right on to the coil. On account of this risk, I like to see the magneto—the ignition device—put on the opposite side of the engine to the carburettor. I regret to say that the present tendency seems to be to put both on the same side, for ease of inspection. For preference I think the magneto should be put on the exhaust pipe side of the engine and the carburettor on the other side.

Owing to the present tendency to put both inlet and exhaust passages on the one side of the engine, there is some difficulty in doing this, but many makers face the difficulty and do it. On



going to adjust, when a car has been made a total or nearly a total loss, one always gets the same report, that once the car ignited it was almost immediately a whole mass of flame. Or sometimes it is that the car was noticed to be burning, and when the bonnet or floor boards were lifted to inspect, it immediately became a mass of flame—that is, as soon as plenty of air was admitted. Now this could not possibly be the case if it was only the carburettor burning. The valve in these will not let oil through very fast, unless it has been burning long enough to undo the soldered joint of some pipe, and in many cases of serious loss we find this has not happened at all.

There are two distinct systems used for feeding the spirit to the carburettor from the tank.

- (a) Gravity feed.
- (b) Pressure feed or forced feed.

In the former, as the name implies, the spirit flows by gravity, and in the latter an artificial air pressure is employed. It is generally about 3lb. to 4lb. per square inch, and is usually maintained automatically by the exhaust gas. At starting it is set up by a small hand-power air pump. In the older cars the petrol tank was usually placed on the dashboard of the car or under the front seat, and the spirit flowed by gravity feed.

But the more modern tendency to build car frames and bodies very low-set, to keep the centre of gravity low, has made it impossible to keep the tank under the front seat of suitable capacity and high enough up at its lowest point to ensure a good flow of spirit by gravity when climbing a stiff hill. For this reason pressure feed has been introduced by many makers, and the tank is now, in a great many cases, put right at the rear of the car. It stands to reason that if a leak in the petrol pipe occurs, the amount escaping will be far greater with the forced feed system.

An efficient stop cock should always be fitted in the petrol pipe near the tank and in an easily accessible position. I have seen many cars, even with pressure-fed systems, that had no cock in the petrol system at all, merely depending on the float operated needle valve in the carburettor to shut the spirit off. These needle valves were never meant for such a purpose. They are only meant to govern the rate of flow of spirit to suit the engine's immediate requirements. Even where a petrol cock



is fitted it is safe to say that in nine cases out of ten it is in a most inaccessible position, where no one would have much chance to use it if the car caught fire.

Further, the driver will often not take the trouble to get at it and turn it off when leaving his car. Another serious fault I have found in most cars is in the form of tray used underneath the engine, etc. This undertray, made of thin sheet metal, is fitted under most cars, running from the very front of the car back to behind the gear box. This is fitted primarily to protect the machinery from water, mud, etc., when running on the road, and also serves to catch any nut or pin that may come out of place.

Now, if there is a leakage of petrol on a car with such a tray, it accumulates on the tray, and when once ignited burns fiercely and for a long enough time to do extensive damage. These trays are seldom kept clean, and get an accumulation of oil and grease on them which burns fiercely when once heated up by the burning petrol. The simple remedy for this is to have narrow louvres stamped crosswise on the tray. These need not be sufficiently wide to allow any nuts, etc., falling loose to drop on the road, and if they are made to face the rear of the car they will not let any mud or water be splashed through on to the machinery. Some makers do this already, and even on an existing machine it would not cost more than a few shillings to do.

I certainly think that underwriters should seriously consider the necessity of these two conditions—that an efficient and easily accessible petrol cock be fitted to every insured car, as near the tank as practicable, and that every undertray to a car should have a series of louvre openings stamped crosswise on the tray, not less than 6in. long and not more than 6in. apart. With oil-driven cars the greatest risk of mechanical breakdown is in the gear box and in the back axle gearing known as the differential, and the engine crankshaft and connecting rods. If the engine crankshaft or a connecting rod is broken, it may result in a general breakage in the engine.

I have also met with a considerable number of cases of broken front axles, generally the short stub axle breaking. It is often very difficult to make the dividing line between actual mechanical breakage and simple wearing out, the one being so dependent on the other. Where cars are insured

against ordinary accident, but not against mechanical breakdown, it is also often hard to mark the dividing line. If the car is insured against ordinary accident, but not mechanical breakdown, it is often unfortunate for the insuring Company if, when some mechanical breakdown occurs, there is a bad rut somewhere in the road, as the owner, I am afraid, often becomes convinced by auto-suggestion that it was the accident of running into the rut which caused the breakage.

I have seen many cases where it was extremely difficult to express a definite opinion. The only guide one has in most cases is a careful examination of the broken part to see if there is any sign of flaw or fatigue in the metal. I find it pays to always carry a pocket glass to assist in this. When metal is bent backwards and forwards a great many times it eventually breaks. Even if it has not been worked beyond the elastic limit, this will be so. This is known as fatigue of metal. If the metal was clearly quite sound, then there obviously must have been some unusual strain. But the test is inconclusive if the metal is unsound.

I remember one particular case of a 16-20 h.p. car in which the front axle had broken clean in two. The car had just been driven out of a gate on to a road with a nasty gutter on the opposite side to the gate. There was only just room to turn the car clear of the gutter, and as it came round to the right the axle broke near the left wheel. When the car stopped it was resting on the spring by the edge of the gutter, the front wheel and end of the axle being in the gutter. It was absolutely impossible to say if the axle had broken and fallen into the gutter or the wheel had run into the gutter and so broken the axle. On examination of the broken axle, it showed signs of fatigue, so that the extra stress of pulling the car round sharply could easily have broken it, or the drop into the gutter with the weight of the car could certainly have done so. The driver, a lady, explained that she felt the jar, when, as she said, the wheel ran into the gutter. On trying to proceed she found the car would not go on, and in trying to get it going stopped the engine. She then got down to start the engine and saw the broken axle, although the wheel was standing in an almost natural position.

THE ELECTRIC CAR has a power plant consisting of two parts.

- (a) An accumulator or storage battery.
- (b) One or more electric motors.

In operation the storage battery is charged first from some power supply while the car is at rest, generally being removed from the car for the purpose. The electrical energy so stored is then given out as desired by the driver to operate the motors which propel the car. These cars are very little used in Australia, as although in every other way almost ideal, the capacity of a storage battery of reasonable weight, in spite of recent improvements, is so small that the radius of action of cars so operated is very limited. They are a great deal used in Europe and America for city use, and as a few are now in use here their properties as an insurance risk must be considered.

With regard to the battery there is no risk from fire so far as self-ignition is concerned, as explained in an earlier part of the paper. I have heard an objection raised to such cars that fire is likely to occur by ignition or by the sparking or "flashing" at the commutator. This commutator is a piece of mechanism on every direct current electric motor, the type which must be used to run from batteries, its purpose being to reverse the direction of current in the motor armature as it revolves, and as an electric current cannot be suddenly stopped or started any more than a flywheel could without the dispersion or absorption of a considerable amount of energy, this energy of reversal evidences itself as heat and occasionally causes a spark or flash on the commutator.

Any risk from that cause is really very small. In any case, to protect the machine from dust and dirt, it is usually enclosed in a case without openings or with openings covered with very fine wire gauze. This gauze will, of course, prohibit the passage of flame through it, as in the well-known Davey Safety Lamp. The fact that after exhaustive inquiry both in Great Britain and here, such motors are allowed in coal mines, even when known to be "gassy," if provided with proper gauze coverings, is, I think, a sufficient guarantee that the risk of fire from such cause is very small indeed.

When this matter of use of electricity in mines was under discussion, a great deal of interest centred on the question of totally-enclosed versus gauze-protected motors, and eventually both types were allowed. The objection to the totally-enclosed type is that owing to no ventilation and consequent bad cooling a comparatively large and heavy motor must be used for a given output. Personally, I believe that the gauze-protected motor

is actually the safest, since in the eventuality of any gas accumulated in the motor becoming ignited, the pressure so set up may be gradually dissipated through the gauze, while otherwise it might cause an explosion of the motor case.

While I do not think the number of electric cars with storage batteries will increase much, I do think that electrical systems of transmission from the engine to the driving wheels will be largely adopted in the future, in which case the foregoing remarks may have greater importance. As regards accident, the electric car must be considered a very safe risk, as the control is always very perfect, and such cars are never built for very high speeds. As regards mechanical breakdown, the risk with storage batteries is very bad, although the recently invented "Edison" battery is certainly a vast improvement on the older types in this respect, but otherwise I consider the risk very good.

#### THE ASSESSMENT OF MOTOR CAR LOSSES.

The remarks in the earlier portion of this paper cover most of the points which can occur in assessing the cost of reinstatement of a car. Genuine total losses are extremely rare, although claims to this effect are very common. The insuring Company's right under the reinstatement clause of the policy is of great value in settling a claim. Companies naturally do not like to take the responsibility of reinstatement, and I have never yet had to ask a Company to themselves undertake it.

I think an adjuster's largest asset is to be able on the spot to make an approximate estimate of the value of the machine before the fire or accident, and an accurate estimate of the value of the work, in detail, necessary to make a complete reinstatement. In case of accident, the value of the car as it stood is very easily seen, but in the case of fire it is much more difficult. But by a close examination of the state of all parts subjected to wear a good estimate should be made as regards the chassis. The age of the car can easily be got from the make and type, as one knows after a few years' experience nearly every model that has been on the market. The most difficult items to value are, of course, accessories and tyres, as these are generally a total loss.

I referred earlier to the inflammability of petrol, but I think



new tyres must be really the most inflammable things on a car. I have hardly ever heard of a car being burnt when fitted with old tyres, or if so the tyres themselves had not burnt. However, a little inquiry as to where and when such parts were purchased generally end in what is probably a fair enough settlement. I did not refer to car bodies at length, but these are generally the first thing lost in a fire, and even if only partly burnt are very difficult to reinstate. There is no doubt that car bodies depreciate in actual value very rapidly, particularly the upholstering and fittings, whereas an owner when reinstating has to get a new one complete. But I have never yet met a claimant who refused finally to make a considerable allowance on account of the benefit he would have in getting a new body in place of the old.

#### *Re HORSE POWER RATING OF CARS.*

The rate charges on all comprehensive motor car policies is based on the horse power of the car. This in itself is, of course, quite equitable, but I think the system of determining the h.p. for this purpose requires some amendment. At the present time the rule is to accept the lowest figure stated by the maker, and unfortunately makers' systems of rating vary very widely, and rates formed on this basis seem to me very hard, comparatively, on the man who can only afford a moderate-priced car.

To take a typical case, one firm in Sydney, among other agencies, sell the following two cars:—

A small runabout; R.A.C. rating, 16.8 h.p.; weight, 11cwt.; seating capacity, two or three; full speed, about 40 miles per hour; maker's rating, 20 h.p.

A heavy touring car, seating five; R.A.C. rating, 19.6; weight, 16cwt.; full speed, about 55 miles per hour; maker's rating, 15 h.p.

It seems to me beyond question that the accident risk must be very much greater with the latter car, with over twice the weight and a very much higher speed, yet it is at present insured at a much lower rate than the former. I can understand that it might be feared too much complication would be involved in using a measurement system of rating, but I do not think this would really be so. There are many systems of rating by measurement in use at present, and of these, two typical ones



are those known as the R.A.C., being that adopted by the Royal Automobile Club, and the A.A., being that adopted by the Automobile Association. The former is dependent on the number and bore of the cylinders, the latter introducing the stroke as well. The R.A.C. rating, while very simple, is also, in my opinion, the most accurate rating in use. It was drawn up by a committee of very noted engineers, the chairman being Mr. Dugald Clerk, one of the highest authorities, I believe the highest, on internal combustion engines.

The formula is—

$$\text{Horse Power} = \frac{D^2 \times N}{2.5} \quad \text{or } .4 D^2 \times N$$

D, diameter of cylinder bore in inches.  
N, number of cylinders.

Now, every proposer will know the number of cylinders his engine has, and will know, or can easily find out, the bore. A table of rates could simply be made out so that if he stated the number and bore of his cylinders no further calculation would be necessary.

#### STEAM BOILERS.

It is sufficient for present purposes to divide boilers under two headings:

- (a) Cylindrical.
- (b) Water tube.

The former type consists of a large outer shell of steel or wrought iron. Practically always mild steel in modern boilers. This shell contains the water to be converted into steam. The furnace is sometimes built inside the shell at one end, and one or more tubes, sometimes several hundreds, convey the hot gases from the furnace to the smoke stack, giving up their heat to the sides of the tubes or flue as they travel. In other boilers the furnace is underneath the main shell, and the hot gases pass right along under the boiler and return through tubes running through it at the same end from which they started, and then pass up the smoke stack. The latter type consists of a series of steel tubes in which the water circulates and is converted into steam, the hot gases from the furnace passing round and among the tubes.

The risk of boilers being seriously damaged by fire is not very great, as they are usually outside the main building, and so escape the greatest heat of the fire. The risk of explosion is much greater in the cylindrical than in the water-tube boiler. All that can happen in the latter class is for a tube to split open.

Here I would like to point out that there is really a wide difference between actual explosion and mere bursting. A boiler may burst, and do no external damage except to throw scalding water and steam about, but when it really explodes it usually wrecks everything near it. Water-tube boilers are claimed to be explosion proof, and at all events there has never been a real explosion with a water-tube boiler yet, to the best of my knowledge. This is no doubt due to the relatively small volume of water in a boiler of this type at any time. With mere bursting, the boiler simply yields by excess of steam pressure beyond the resisting strength of the material containing it. The pressure then falls, and at no time is there a greater pressure than that at which the material yielded. When real explosion occurs, local pressures are set up of immense magnitude. This is a phenomenon very little understood.

A good analogy is the combustion and explosion of an inflammable mixture of gases. When combustion of such a mixture takes place, as in a gas-engine cylinder, and generally miscalled the "explosion" in the cylinder, the combustion travels through the mixture steadily at a rate depending upon the nature and state of the mixture. There is for every condition a maximum pressure at which all combustion ceases. As the gas cools or expands behind the piston, more gas burns, and so on. But if the gas actually exploded, the action would be very many times as rapid, and the limiting pressure, if any, would be at an enormously high value, and would easily burst any engine cylinder.

There has been much investigation and there are many theories, but I think all that can be said is that one is a steady action with a limiting value, while the other is a vibratory action, and if the frequency of the vibratory action set up corresponds to the natural frequency of the body of gas in which it occurs, the enormously high pressure evidenced in boiler and other explosions are produced.

The success or otherwise of boiler insurance, and, I

think, most machinery insurance, must depend largely upon competent periodical inspection. The first point in such inspections is to test the gauges and safety valves for accuracy and free working. It must be seen to that the safety valves do not merely blow-off at the proper pressure, but that they are of a good reliable type, and have sufficient area to materially relieve the pressure when they do open.

I have frequently seen boilers fitted with safety valves which would not carry off enough steam to appreciably relieve the boiler when wide open. Safety valves are of two general types, those controlled by a spring which is always adjustable, and those controlled by a weight on a lever. Both types are quite satisfactory if of a good design.

In addition to safety valves, boilers are often fitted with fusible plugs. These depend on the following principle. We know that saturated steam—*i.e.*, steam in contact with the water from which it rises—has a definite temperature for every pressure. Consequently, knowing the pressure of our steam, we also know the temperature, and if we put in a plug made of an alloy which will melt at a little above that temperature, any excessive pressure in the boiler will cause the plug to yield, and so release the pressure. The inspector must also examine the boiler carefully from time to time for any excessive corrosion, etc. It is also very important to see that the feed pumps or injectors in use are of a proper size and type. These are generally of ample size, but their arrangement is often bad.



# THE DISABILITY FEATURES IN LIFE POLICIES.

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By SIDNEY H. PIPE, F.A.S., A.I.A.

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*A Paper read before the Insurance Institute of Toronto.*

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SECTION 8, Sub-section 1, of the Canadian Insurance Act, 1910, is as follows:—"Subject to the right of renewal of licences granted previously to the eleventh day of August, 1899, a licence shall not be granted to a Company to carry on the business of life insurance in combination with any other branch of insurance: provided that any life insurance company within the legislature power of the Parliament of Canada, and any other life insurance company licensed under this Act whose Charter authorises it, may, under the authority of its licence to transact life insurance, issue life policies including in the same policy insurance against disability caused by accident or sickness, but the amount of such disability insurance shall not exceed the premiums payable or accruing on such life and disability policy during the period of disability insured against, but in case of total and permanent disability the company may, at the request of the insured, and without further payment of premiums, pay, in full settlement of the policy, and as a substitute for all other benefits and privileges thereunder, a total and permanent disability benefit not exceeding the sum insured under the policy."

This sub-section permits a Life Company to include in its policies a sickness benefit not exceeding annually the premium under the policy, and a total and permanent disability benefit equal to the sum assured.

Life Companies, however, have restricted the disability



feature in their policies to a benefit dependent upon total and permanent disability. The following clause embraces its most usual features:—

“It is hereby provided that should the assured, before attaining the age of sixty years, and after paying at least one full annual premium and before default in payment of any subsequent premium, furnish proof satisfactory to the Company that he has, by bodily injury or disease, become wholly and permanently disabled and is thereby prevented from performing any and every kind of duty pertaining to his occupation or any other occupation or gainful pursuit, the Company will waive payment of the premiums thereafter falling due, which premiums so waived will not be an indebtedness hereon and this policy will continue in full force. Provided that, notwithstanding proof of disability may have been accepted by the Company as satisfactory, the assured shall on each and every premium due date furnish the Company with satisfactory proof of the continuance of such disability, and if the assured shall fail to furnish such proof, or if it shall appear to the Company the assured is able to perform any work, or to follow any occupation whatsoever for compensation, gain, or profit, all premiums thereafter falling due must be paid in accordance with the terms of this contract.

“Without prejudice to any other causes of total and permanent disability, the Company will consider the entire and irrecoverable loss of the sight of both eyes, or the severance of both hands at or above the wrists, or of both feet at or above the ankles, or of one entire hand and of one entire foot, as total and permanent disability within the meaning of this provision.”

According to this clause, known as the “waiver of premium” benefit, the policy becomes paid up upon the assured becoming totally and permanently disabled.

Another form of disability benefit is to pay the sum assured in twenty annual instalments. One prominent Company uses the following clause to cover this benefit—“The Company will also, upon the written request of the assured and of the beneficiary and assignee, if any, and after payment of all indebtedness to the Company in respect of the policy under the non-forfeiture provision or otherwise, agree by endorsement

hereon to pay in lieu of all other benefits and privileges herein provided, and in full settlement of this policy, one-twentieth of the amount assured immediately, and a like amount yearly thereafter until twenty such instalments in all shall have been paid. Should the assured die before the twenty instalments shall have been paid, the remaining instalments shall be paid to the beneficiary as they become due." In the event of disability proving to be temporary instead of permanent, it is provided that the instalments shall cease and the original policy shall be restored for its face amount, less the sum of the instalments paid; and also that the guaranteed values shall be reduced proportionately, but that no reduction shall be made in the future premiums.

#### STATISTICAL INFORMATION.

The disability feature in the policies of a Commercial Life Insurance Company is a modern innovation on this Continent. In Europe, however, Germany has been the principal exponent of the various benefits dependent upon total and permanent disability for over thirty years, and Russian Companies are also considerably interested in this subject.

There are abundant German statistics, but they are not considered applicable to conditions in Canada. They consist of the experience of railway employees and miners, the former being sub-divided into three sections, namely (a) trainmen, (b) other than trainmen, (c) office employees. The German Government has also published statistics relating to compulsory insurance against permanent disability. Since the policy-holders in Life Insurance Companies here are medically examined lives of a different social class from the risks comprising the German experiences, the latter are of little or no value to Canadian Companies in determining the cost of the disability benefits granted by them.

For this information we have to make use of the statistics compiled by the fraternal societies. One, at least, of these organisations has been granting disability benefits for over thirty years. Here we have a sufficiently close resemblance between the risks accepted by these Societies and the policy-holders of a regular Life Insurance Company to make a suitable basis for computing the cost of the "waiver" or "instalment"

benefit. This statement may be disputed by Life Insurance Companies owing to the small medical examination fee paid by applicants for admission to fraternal societies. But judging by the resulting mortality rates, the Societies get good value for their money in this respect. Generally speaking, a Society is also protected by conditions in its policy contracts and by its constitution and laws. Their policies never become indisputable. Cases of suicide are seldom settled for the face value of the policy, and where death can be traced to the excessive use of alcohol the claim is generally treated as one of suicide.

It is impossible to make a correct comparison between the rates of disability experienced by different Societies unless the method is known which each Society uses in dealing with the claims.

Two separate experiences have been published, namely, that compiled by Mr. Landis from the records of the "Maccabees" and "Royal League," and used by Mr. Mead, F.A.S., in his paper in Vol. XI. of the Transactions of the Actuarial Society, and the experience of the Independent Order of Foresters, compiled by myself. The two Societies use different methods in dealing with their disability claims. A member becoming disabled in the "Maccabees" files his claim with the local lodge which passes upon it. At the end of a probationary period of six months the lodge again passes upon it and forwards it to Head Office, where it is finally accepted or rejected. The effect of this method is that members becoming disabled and dying within the six months' probationary period are not recorded at Head Office. Consequently, both the rate of disability and the death-rate amongst disabled lives are shown to be lower than is actually the case.

A member in the Foresters sends his application for disability benefit through the local lodge to Head Office. After a probationary period of six months a further application and medical examination is made, and the benefit paid or the application rejected, or probationary period extended. Consequently this Society includes in its experience many cases of disability which would not come into the experience of the Maccabees.

There is no object in giving the results of these two experiences, since Mr. Arthur Hunter, Actuary of the New-York Life, has combined these two experiences into an ultimate table by eliminating the first five policy years. He has made allowance

for the difference in the practice of the two Societies in dealing with their disability claims. The following table shows the rate of disability per 10,000 obtained by him at each age:—

Age.	Rate.	Age.	Rate.	Age.	Rate.
20 ...	5·15	36 ...	6·70	51 ...	18·51
21 ...	5·17	37 ...	7·03	52 ...	20·27
22 ...	5·19	38 ...	7·41	53 ...	22·30
23 ...	5·21	39 ...	7·84	54 ...	24·68
24 ...	5·24	40 ...	8·32	55 ...	27·52
25 ...	5·28	41 ...	8·85	56 ...	30·95
26 ...	5·33	42 ...	9·43	57 ...	35·12
27 ...	5·39	43 ...	10·06	58 ...	40·21
28 ...	5·46	44 ...	10·75	59 ...	46·43
29 ...	5·53	45 ...	11·51	60 ...	54·02
30 ...	5·61	46 ...	12·56	61 ...	63·26
31 ...	5·71	47 ...	13·31	62 ...	74·47
32 ...	5·84	48 ...	14·38	63 ...	88·02
33 ...	6·00	49 ...	15·59	64 ...	104·33
34 ...	6·19	50 ...	16·96	65 ...	123·88
35 ...	6·42				

The data was too scarce after age 65 to obtain reliable rates. Owing to the rapid increase in the rate after age 60, it is usual for Companies to stipulate that disability must occur before that age.

#### THE DEATH-RATE AMONGST DISABLED LIVES.

To determine the cost of the disability features in life policies, it is necessary to know the death-rate amongst disabled lives.

The following table is based upon the Foresters' experience and shows the distribution of the causes of disability according to chief causes:—

Cause.	Ratio.
Consumption .....	23·4 per cent.
Paralysis .....	12·8 „ „
Insanity .....	12·0 „ „
Diseases of the circulatory system .....	7·3 „ „
Diseases of the urinary system .....	5·3 „ „
Cancer .....	4·7 „ „
Injury .....	4·4 „ „
All others .....	30·1 „ „

A mortality experience consisting of lives suffering from the above complaints must necessarily show an extremely high rate.

Mr. Hunter used the same experience and obtained the following death-rates per 1000 amongst disabled lives. The death-rates for the first five years only following disability are given, for each quinquennial age at disability, for the purpose of illustrating the peculiarities of the experience:—

Age at Disability.				Years following Disability.				
				1st.	2nd.	3rd.	4th.	5th.
20	...	...	...	471	232	175	133	110
25	...	...	...	400	190	134	91	73
30	...	...	...	353	162	109	71	56
35	...	...	...	327	148	99	64	49
40	...	...	...	306	139	96	64	49
45	...	...	...	290	140	106	74	51
50	...	...	...	273	144	118	86	62
55	...	...	...	248	147	119	94	74
60	...	...	...	220	147	122	103	86

It will be noticed that the mortality improves with the time elapsed since disability. Year by year it must more nearly approach the mortality shown by standard tables owing to the death of the most serious cases in the first two or three years following disability.

The use of a high rate of disability with a low death-rate amongst disabled lives is the safe course to pursue in the calculation of the cost of the "waiver" and "instalment" disability benefits. It is far too complicated a process to use a mortality table, as above, in the "select" form for disabled lives, so Mr. Hunter eliminated the first year following disability from the mortality experience and obtained the following table, which, as far as our present knowledge goes, may be considered a safe and practical one:—



*Mortality among Disabled Lives per 1000.*

Age.	Rate.	Age.	Rate.	Age.	Rate.	Age.	Rate.
20 ...	205	35 ...	89	50 ...	91	65 ...	115
1 ...	193	6 ...	88	1 ...	92	6 ...	115
2 ...	182	7 ...	88	2 ...	94	7 ...	115
3 ...	171	8 ...	87	3 ...	96	8 ...	115
4 ...	161	9 ...	86	4 ...	99	9 ...	115
5 ...	151	40 ...	85	5 ...	101	70 ...	115
6 ...	141	1 ...	85	6 ...	103	1 ...	116
7 ...	132	2 ...	85	7 ...	105	2 ...	116
8 ...	123	3 ...	86	8 ...	107	3 ...	116
9 ...	114	4 ...	86	9 ...	109	4 ...	117
30 ...	106	5 ...	87	60 ...	111	5 ...	118
1 ...	100	6 ...	88	1 ...	113	6 ...	119
2 ...	95	7 ...	88	2 ...	114	7 ...	121
3 ...	92	8 ...	89	3 ...	114	8 ...	126
4 ...	90	9 ...	90	4 ...	115	9 ...	133

From age 80 and upwards the table is assumed to run with the American experience tables. By slightly modifying the rates at ages 78 and 79 to 124 and 129 per 1000 respectively, the table will run smoothly into the  $O^{M(5)}$  table

## CALCULATION OF THE NUMBER OF ACTIVE SURVIVORS.

For the calculation of benefits dependent upon total and permanent disability we require to know the number of active or premium-paying survivors out of a number of entrants of a given age. The total mortality amongst all survivors, both active and disabled, is that of the basic mortality table, which, in Canada, is the  $O^{M(5)}$ . That is, of  $l_x$  entrants aged  $x$ ,  $l_{x+n}$  will survive, of whom a certain number, designated by  $l_{x+n}^{aa}$  will be active, and the remainder  $l_{x+n}^{ii}$  will be disabled. Since all entrants are active,  $l_x = l_x^{aa}$ .

The information available for the determination of the active survivors at each age of  $l_x$  entrants is the basic mortality table, the rate of disability at each age and the death rate amongst disabled lives. For the sake of simplicity we will assume these rates are in the ultimate form.

Let  $q_x^i$  = the probability of a disabled life, aged  $x$ , dying within a year.

$r_x^i$  = the rate of disability at age  $x$ .

$d_x^{aa}$  = the number dying as active lives at age  $x$ .

$d_x^{ii}$  = the number dying as invalid lives at age  $x$ .

$i_x$  = the number of active lives becoming disabled at age  $x$ .

Then  $l_{x+n+1}^{aa} = l_{x+n}^{aa} - d_{x+n}^{aa} - i_{x+n}$

The number exposed to risk of disability between  $x$  and  $(x+1)$  is  $l_x^{aa} - \frac{1}{2} d_x^{aa}$ .

$$\text{Hence, } i_x = r_x^i (l_x^{aa} - \frac{1}{2} d_x^{aa}). \quad (1)$$

Let  $r_x$  the probability of a life becoming disabled at age  $x$ , which equals  $i_x \div l_x^{aa}$ , and  $q_x^{aa}$  = the probability of an active life dying, while still active, within a year, which equals  $d_x^{aa} \div l_x^{aa}$ .

Then from equation (1)—

$$r_x = r_x^i (1 - \frac{1}{2} q_x^{aa}). \quad (2)$$

Of the  $i_x$  lives becoming disabled at age  $x$ , a number will die before reaching age  $x+1$ . For the purpose of making the following formulæ clearer, we will let  $q_{[x]}^i$  represent the rate of mortality amongst disabled lives in the year of disability, such that  $q_{[x]}^i i_x$  represents the number of lives becoming disabled and dying in the same year.

$$\begin{aligned} \text{Then, } d_x^{ii} &= q_x^i l_x^{ii} + q_{[x]}^i i_x \\ &= q_x^i l_x^{ii} + q_{[x]}^i r_x^i (l_x^{aa} - \frac{1}{2} d_x^{aa}). \\ \therefore d_x^{aa} &= d_x - q_x^i l_x^{ii} - q_{[x]}^i r_x^i (l_x^{aa} - \frac{1}{2} d_x^{aa}), \end{aligned}$$

from which

$$d_x^{aa} = \frac{d_x - q_x^i l_x^{ii} - q_{[x]}^i r_x^i l_x^{aa}}{1 - \frac{1}{2} q_{[x]}^i r_x^i} \quad (3)$$

The values in equation (3) consist of the rates of mortality and disability which can be determined from experience.

Formulæ (3) may be simplified as follows:—

If we assume  $q_{[x]}^i = \frac{1}{2} q_x^i$  it becomes

$$d_x^{aa} = \frac{d_x - q_x^i [l_x^{ii} + \frac{1}{2} l_x^{aa} r_x^i]}{1 - \frac{1}{4} q_x^i r_x^i} \quad (4)$$

Or, the formula may be still further reduced by assuming that all those becoming disabled during the year survive to the end of

the year. In this case  $q_{[x]}^i = 0$  and formulæ (3) reduces to the simple form

$$d_x^{aa} = d_x - q_x^i l_x^{ii} \quad (5)$$

which is the form generally used.

Formula (5) reduces the actual number of deaths amongst the disabled and consequently increases the "active" deaths. The number of active survivors is therefore slightly reduced and an error introduced which is on the safe side.

The number of lives becoming disabled during the year may now be determined from formula (1). Again, by ignoring the quantity,  $\frac{1}{2} d_x^{aa} r_x^i$ , or, in other words, assuming that the rate of disability equals the probability of becoming disabled, a further error on the safe side is introduced and the calculations reduced. This is the usual method used in practice. Our present knowledge of this subject renders these safeguards necessary, and a liberal margin is required over and above the theoretical premium for the waiver of premium benefit.

We have the three simple equations:

$$\begin{aligned} l_{x+1}^{aa} &= l_x^{aa} - d_x^{aa} - i_x \\ d_x^{aa} &= d_x - q_x^i l_x^{ii} \\ \text{and} \quad i_x &= r_x^i l_x^{aa} \end{aligned}$$

from which the  $l_x^{aa}$  column can be calculated with sufficient accuracy. From the resulting table the probability of a life entering at age  $x$  remaining active each successive year thereafter can be calculated. From the  $l_x^{aa}$  column we can calculate the  $D_x^{aa}$  values and the value of an annuity payable during activity only, namely,  $a_x^{aa}$ . The difference between  $a_x$  and  $a_x^{aa}$  represents the present value of the single premium for the waiver of premium benefit when the premium under the policy is 1 per annum. Since the annual premium for this benefit is payable only whilst the life remains active, its value will be the single premium divided by  $a_x^{aa}$ . The table showing the number of active and disabled survivors is known, for want of a better expression, as a "combined" table. Since the construction of a combined table does not involve any alteration of the probabilities of death or survivorship denoted by the basic table, the correct method of calculating the premiums for the waiver

of premium benefit is to construct a combined table for each age at entry.

Let us now assume that having constructed a combined table with *radix* age  $x$ , we require to know the value of a life annuity on an active survivor who entered at that age  $t$  years ago. Let this annuity be represented by  $a_{x+t}^a$  and the probability of an active life now aged  $x+t$  surviving  $n$  years by  $np_{x+t}^a$

Of the  $l_{x+t}^{ii}$  disabled survivors at age  $(x+t)$ ,  $np_{x+t}^i l_{x+t}^{ii}$  will survive  $n$  years. Hence the number becoming disabled during that time amongst the  $l_{x+t}^{aa}$  active lives will be  $(l_{x+t+n}^{ii} - np_{x+t}^i l_{x+t}^{ii})$ . The number of active survivors will be  $l_{x+t+n}^{aa}$ . Hence—

$$\begin{aligned} np_{x+t}^a l_{x+t}^{aa} &= l_{x+t+n}^{aa} + l_{x+t+n}^{ii} - np_{x+t}^i l_{x+t}^{ii} \\ &= l_{x+t+n}^{aa} - np_{x+t}^i l_{x+t}^{ii} \\ \therefore np_{x+t}^a &= \frac{l_{x+t+n}^{aa}}{l_{x+t}^{aa}} - \frac{l_{x+t}^{ii}}{l_{x+t}^{aa}} np_{x+t}^i \\ &= np_{x+t} \frac{l_{x+t}^{aa}}{l_{x+t}^{aa}} - np_{x+t}^i \frac{l_{x+t}^{ii}}{l_{x+t}^{aa}} \\ \therefore a_{x+t}^a &= a_{x+t} \frac{D_{x+t}^{aa}}{D_{x+t}^{aa}} - a_{x+t}^i \frac{D_{x+t}^{ii}}{D_{x+t}^{aa}} \\ &= a_{x+t} + \frac{D_{x+t}^{ii}}{D_{x+t}^{aa}} (a_{x+t} - a_{x+t}^i) \end{aligned} \quad (6)$$

This annuity value can be used to obtain a close approximation to the single premium for the waiver of premium benefit. By assuming that  $l_{x+t}^{aa}$  has the same value at that age, and does not vary with age  $x$  at entry, all values of  $a_{x+t}^{aa}$  can be computed without constructing combined tables for each age at entry. Formula (6) gives the value of a life annuity corresponding to the assumption made concerning the  $l_{x+t}^{aa}$  column. Hence the value of the single premium is  $(a_x^a - a_x^{aa})$  for all values of  $x$  when a single combined table is used in place of combined tables for each age at entry. It has been claimed that this formula is theoretically correct, but it will be seen that it involves an alteration in the probabilities of survivorship denoted by the basic mortality table. The correct value

of  $a_{x+t}^a$  appears to me to be that of a life annuity on an active survivor who entered  $t$  years ago, in which case the probabilities involved in the basis table remain unaltered. The waiver of premium clause usually contains a condition that the benefit cannot be claimed in the event of becoming disabled after 60 years of age. In this case the combined tables are constructed in the manner above indicated, except that  $r_x^i = 0$  for ages 60 and upwards. It is also usual to assume that the mortality amongst disabled lives for ages 80 and upwards is equal to that of the basic table.

### PREMIUMS.

Let  $y =$  the limiting age imposed in the waiver of premium benefit and  $l$  the actual premium under the policy.

Let  ${}_{y-x}P_x^{ai:\overline{y-x}|} =$  the annual premium for the waiver of premium benefit payable during activity to age  $y$ .

${}_{y-x:n}P_x^{ai:\overline{y-x}|} =$  the annual premium for the waiver of premium benefit payable during activity to age  $y$  or for  $n$  years, whichever is the shorter.

$a_{x:n:y-x}^{aa} =$  an annuity due of 1 per annum payable during activity to age  $y$  or for  $n$  years, whichever is the shorter.

$$\text{Then} \quad {}_{y-x}P_x^{ai:\overline{y-x}|} = \frac{a_x - a_x^{aa}}{a_{x:y-x}^{aa}} \quad (7)$$

$$\text{and} \quad {}_{y-x:n}P_x^{ai:\overline{y-x}|} = \frac{a_{x:n}^{aa} - a_{x:n}^{aa}}{a_{x:n:y-x}^{aa}} \quad (8)$$

Both these formulas are based on combined tables constructed to allow for the limiting age in the waiver of premium benefit.

### RESERVES.

If a Company granted  $l_x$  policies each with an annual premium of 1 per annum and containing the waiver of premium benefit, there would remain at the end of  $n$  years  $l_{x+n}$  policies on  $l_{x+n}^{aa}$  active lives and  $l_{x+n}^{ii}$  disabled lives.

The Company, instead of receiving  $l_{x+n}$  annuities, each of the value  $a_{x+n}$ , would be receiving  $l_{x+n}^{aa}$  annuities, each of the value  $a_{x+n}^{aa}$ . The Company's liability under its waiver of premium benefit would therefore be  $(l_{x+n} a_{x+n} - l_{x+n}^{aa} a_{x+n}^{aa})$ .



The value of the future premiums to be received from the active survivors would be  $l_{x+n}^{aa} \text{ }_{y-x} P_{\overline{y-x}|}^{\text{ai}} \text{ } a_{x+n:\overline{y-x-n}|}^{aa}$

Hence, the total reserves under the  $l_{x+n}$  contracts would be

$$l_{x+n} \text{ } a_{x+n} - l_{x+n}^{aa} \text{ } a_{x+n}^{aa} - l_{x+n}^{aa} \text{ }_{y-x} P_{\overline{y-x}|}^{\text{ai}} \text{ } a_{x+n:\overline{y-x-n}|}^{aa} \quad (9)$$

$$= l_{x+n} \text{ } a_{x+n} - l_{x+n}^{aa} \left[ \text{ } a_{x+n}^{aa} + \text{ }_{y-x} P_{\overline{y-x}|}^{\text{ai}} \text{ } a_{x+n:\overline{y-x-n}|}^{aa} \right] \quad (10)$$

Dividing this expression by  $l_{x+n}$  we obtain the reserve per unit of premium to be maintained both on active and disabled lives, as

$$\text{ } a_{x+n} - \frac{D^{aa}}{D} \left[ \text{ } a_{x+n}^{aa} + \text{ }_{y-x} P_{\overline{y-x}|}^{\text{ai}} \text{ } a_{x+n:\overline{y-x-n}|}^{aa} \right] \quad (11)$$

Formula (10) may be put in the following form:—

$$l_{x+n}^{aa} \left[ (\text{ } a_{x+n} - \text{ } a_{x+n}^{aa}) - \text{ }_{y-x} P_{\overline{y-x}|}^{\text{ai}} \text{ } a_{x+n:\overline{y-x-n}|}^{aa} \right] + l_{x+n}^{ii} \text{ } a_{x+n} \quad (12)$$

making the reserve on active lives the expression in the square brackets and the reserve on disabled lives  $\text{ } a_{x+n}$ . The third method of dealing with the reserves is to make the reserve on disabled lives  $\text{ } a_{x+n}^i$  for each unit of premium. The reserve on active lives is obtained by deducting  $l_{x+n}^{ii} \text{ } a_{x+n}^i$  from formula (12). The expression, after dividing by  $l_{x+n}^{aa}$ , becomes

$$\begin{aligned} & \text{ } a_{x+n} - \text{ } a_{x+n}^{aa} - \text{ }_{y-x} P_{\overline{y-x}|}^{\text{ai}} \text{ } a_{x+n:\overline{y-x-n}|}^{aa} + \frac{l_{x+n}^{ii}}{l_{x+n}^{aa}} (\text{ } a_{x+n}^i - \text{ } a_{x+n}^i) \\ & = (\text{ } a_{x+n}^a - \text{ } a_{x+n}^{aa}) - \text{ }_{y-x} P_{\overline{y-x}|}^{\text{ai}} \text{ } a_{x+n:\overline{y-x-n}|}^{aa} \end{aligned} \quad (13)$$

From the argument from which formula (1) is obtained, it is evident these formulas are based upon combined tables for each age at entry. Consequently,  $\text{ } a_{x+n}^a$  in formula (6) is the value of a life annuity on an active survivor who entered  $n$  years ago at age  $x$ . The appearance of  $\text{ } a_{x+n}^a$  in this formula has led to the incorrect conclusion that all these formulas are based upon a single combined table.

If a single combined table is used the reserved formulas are obtained as follows:—

Of  $l_x^{aa}$  active entrants at age  $x$ , there will survive  $l_{x+n}^{aa}$

active survivors at the end of  $n$  years and  $(l_{x+n}^{ii} - np_x^i l_x^{ii})$  disabled survivors. Hence the total reserve becomes—

$$(l_{x+n} - np_x^i l_x^{ii}) a_{x+n}^a - l_{x+n}^{aa} a_{x+n}^{aa} - {}_{y-x}P_x^{ai: \overline{y-x}} | a_{x+n: g-x-n}^{aa} |$$

which may be put in the form— (14)

$$l_{x+n}^{aa} [a_{x+n}^a - a_{x+n}^{aa}] - l_{x+n}^{aa} {}_{y-x}P_x^{ai: \overline{y-x}} | a_{x+n: y-x-n}^{aa} | + (l_{x+n}^{ii} - np_x^i l_x^{ii}) a_{x+n}^a \quad (15)$$

This formula can be sub-divided in the same manner as indicated in the case of formula (12), but cannot be reduced to the simple form of formula (13).

Since the reserve to be maintained on account of the waiver of premium benefit is still an undecided question, it will perhaps be profitable to discuss the above three methods.

Since all these methods produce exactly the same total reserves if the experience of the Company coincides with the assumptions made in the calculation of the premiums, the higher the reserve maintained on disabled lives the lower will be the reserves on active lives.

Consequently, if we assume that the death-rate amongst the disabled closely corresponds to the table used in the calculation of the premiums, and that the disability experience is favourable, method (3) formula (13) will produce the lowest reserves, and method (1) formula (11) the highest. Method (2) formula (12) and method (3) will produce negative reserves for active lives for a number of years. Hence with a favourable disability experience for a number of years, the reserves accumulated by method (3), and in a lesser degree by method (2), will be too low. If the mortality amongst the disabled is lower than the "expected," the reserves on disabled lives, under method (3), will also be underestimated.

If, on the other hand, the disability experience is unfavourable, method (3) would be the safest one to use. When we consider, however, the precautions taken to prevent this by the use of ultimate tables of disability and mortality amongst disabled lives, a favourable disability experience appears the more likely to happen.

After considering this question, I have come to the conclusion that method (1) formula (11) is the best for practical purposes. Formerly I was in favour of method (2) because it gave higher

reserves on active lives than method (3), and a favourable disability experience is more likely to happen than an unfavourable one. The reserves are also easier to calculate. At that time, however, I had not considered the advantages of method (1), the chief of which is that a reserve is immediately built up in accordance with the assumptions made in the calculation of the premiums. This is the course pursued in calculating policy reserves, and I think it is equally applicable to this case. Granted that the data used in the construction of the combined tables is safe, then method (1) will produce the best practical results.

The calculation of the commutation columns appended to the paper was made by the method given on p. 20, Vol. XIII. of the Transactions of the Actuarial Society, by which the work was much shortened.

This paper should include a discussion of instalment disability benefits. These, however, are at present comparatively unimportant compared with the waiver of premium benefit.

# THE LIFE ASSURANCE CONTRACT.

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By EDWARD W. SYDER,  
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*A Paper read before the Insurance Institute of Liverpool,  
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WHEN our President, Mr. Heal, honoured me with an invitation to read a paper before the members of the Institute, he relieved me of some embarrassment by stating that he would be glad if I would make my paper suitable to the needs of the younger members who were preparing for the examinations of the Chartered Institute in the Life Branch. I am more particularly glad to fall in with Mr. Heal's wishes in this respect as, owing to paucity of numbers, the classes for students for the examinations in Part 3 (Life) at this Centre have been allowed to drop this year, whilst there are, I know, several students intending to take the examinations. It has always been somewhat of a struggle for us in Liverpool to obtain sufficient numbers to justify the provision of special classes for instruction in the higher branches of the subject, and it is unfortunate that it is in those branches that special instruction is most useful.

The syllabus of the Institute includes as one of its subjects the elementary law of Life Insurance, and very wisely so, for a general knowledge of this subject enables a Life Clerk to take a far more intelligent interest in his work than he could otherwise do. But what proportion of the Life staff at a Branch Office or even a Head Office of a Company have opportunities for obtaining such knowledge in the course of their ordinary daily work? They have, therefore, to rely, apart from the provision of any special instruction, upon their own reading. I have accordingly taken the opportunity afforded me by this paper to refer to some of the more important legal questions bearing on the subject of the Life Insurance Contract, and

although it is, of course, not possible in a single paper to deal with more than a portion of the subject, and that but superficially, I hope that my notes may be of some service to those for whose benefit they are particularly intended.

#### INSURABLE INTEREST—INDEMNITY.

When the framers of the famous Act of 14, George III., caput 48, familiarly known as the Gambling Act, set out to deal with the scandal of wagering policies, which had attained very considerable dimensions, they sought to carry out their purpose by impressing upon all contracts of insurance two great principles, Insurable Interest and Indemnity. The first section of the Act declares that "no insurance shall be made by any person or persons, bodies politic or corporate, on the life or lives of any person or persons, or on any other event or events whatsoever, wherein the said person or persons for whose use, benefit, or on whose account such policies shall be made, shall have no interest or by way of gaming or wagering, and that every assurance made contrary to the true intent and meaning hereof shall be null and void to all intents and purposes whatsoever." Herein we have the principle that a valid insurance contract can only be negotiated with a person possessing an interest in the subject of the assurance. The second principle, that of indemnity, is found enshrined in the third section of the Act, which states that "in all cases where the insured hath interest in such life or lives, event or events, no greater sum shall be recovered from the insurer or insurers than the amount or value of the interest of the insured in such life or lives, event or events." So far as fire insurance and marine insurance are concerned, the principle of indemnity is, at any rate in theory, rigidly enforced, but when we come to consider closely the nature of the life insurance contract, we speedily encounter difficulties in applying that principle. So far as I am aware, the principle of indemnity has always been ignored as regards assurances on a man's own life. And how could it be otherwise? You cannot indemnify a man's estate as representing himself for the loss of his life, and if you sought to indemnify his heirs-at-law for the exact pecuniary value to them of his life, I fear you might occasionally encounter what are known to our Actuarial friends as



negative values. At any rate, if the attempt has ever been made in the misty past to construe an own life assurance as a contract of indemnity, I should like to see the correspondence which took place at the settlement of the claim—it would be vastly diverting. When, however, we turn to an assurance effected by one person on the life of another, we find there is the possibility of importing the principle of indemnity into the contract. The insurance is effected to protect some definite interest, and to constitute the contract as one of indemnity it would only be necessary to apply the third section of the Gambling Act, as is done in the case of fire or marine insurances, and limit the amount that could be recovered under the policy to the value of the interest at the time a claim occurred. This was long held to be the correct view based upon the judgments of two such eminent judges as Lords Mansfield and Ellenborough. In the year 1855, however, a famous law suit (*Dalby v. India and London Assurance Co.*), which forms one of the landmarks in the legal history of life assurance, came before the Courts for determination. The presiding Judge in this case, Baron Parke, in delivering judgment, stated “The contract commonly called Life Assurance, when properly considered, is a mere contract to pay a certain sum of money on the death of a person, in consideration of the due payment of a certain annuity for his life, the amount of the annuity being calculated in the first instance according to the probable duration of his life, and when once fixed, is constant and invariable. The stipulated amount of the annuity is to be uniformly paid on one side, and the sum to be paid in the event of death is always (except where bonuses have been given by prosperous Offices) the same on the other. This species of assurance in no way resembles a contract of indemnity.”

Against the contention of the Defendant Company that under the third section of the Gambling Act the law required the existence of an interest as a precedent to recovery, and that that interest was the interest outstanding when the insurance fell in, the Court decided that the interest referred to was the interest existing when the insurance *was effected*; as to admit the Defendant's contention would alter the construction of the contract from a contract to pay a fixed sum into one to pay a fluctuating amount or even nothing at all, notwithstanding the

invariable amount of the premium, and, the learned Judge added, "This seems so contrary to practice and fair dealing and common honesty that this construction cannot, we think, be put upon this section."

Mr. J. B. Porter, in his "Laws of Insurance," expresses himself very strongly against the judgment in this case, and argues, amongst other things, that it is clear that the same words in the same statute cannot be capable of two different constructions when applied to a fire insurance contract and a life insurance contract.

However, so far as the Life Offices are concerned, the matter has apparently been effectively disposed of, and Life Insurance is no longer looked upon as a contract of indemnity. Provided the interest which the assured possesses at the time the assurance is effected is sufficient to support the assurance, the subsequent diminution or extinction of such interest does not in any way reduce or invalidate the policy.

A man is considered to have an unlimited insurable interest in his own life, although the Insurance Office, from motives of prudence, naturally satisfies itself that the sum to be assured is in keeping with his means, otherwise there would be grounds for suspicion that he has a shrewd notion that his life is a more than usually hazardous one.

There is another point in connection with the interest necessary to support an assurance to which reference may be made, but it is unnecessary to labour it, as the matter has already been fully discussed in former papers read before this Institute—I mean the *nature* of the interest required. The interest must be a "valuable" and not merely a "sentimental" one; in fact, the best general term in which to express it is to say that it must be a "pecuniary" interest—as one text book I remember reading said, "An insurable interest must have a value in £ s. d."

Moreover, the value of the interest must be not less than the amount of the assurance. If the assured, therefore, insures the same interest with several Companies, he could recover from them all only the amount of his interest at the time the assurances were effected, and if he received the amount of that value from one he can claim nothing from the others.

The law will not allow the provisions of the statute (the Gambling Act) to be evaded by an assurance being nominally

effected by a person on his own life, but really for another person who pays the premiums and to whom the policy is assigned, and in such a case a defence of absence of insurable interest can be just as legitimately raised as in the case of a "life of another" policy.

There is one class of persons who possess a statutory insurable interest apart from any question of pecuniary interest; I mean married women in the lives of their husbands. By the provisions of the Married Women's Property Acts, 1870 and 1882, it is enacted that a married woman may insure her own life or the life of her husband, so that she can effect a valid assurance on his life, even although she may not be likely to suffer in a pecuniary sense through his death. A married man has not, however, been generally presumed to have such an interest in his wife's life, although in view of the judgment of the Court of Appeal in the case of *Griffiths v. Fleming* delivered in 1909, I am afraid we shall have to revise our opinions in this regard. I am aware that it has been a common practice for some Offices to issue joint life policies on the lives of husband and wife, and there has seemed to be a valid legal sanction for the issue of such policies, provided they are for modest amounts, in the fact that a man actually does in most instances suffer some pecuniary detriment by the loss of his wife—he has to make other arrangements for his housekeeping which may entail additional expense upon him. But this has generally been considered the limit of the "insurable interest" apart from the protection of any other existing pecuniary interest which the husband might enjoy during his wife's lifetime, but which would be diverted from him at her death. In the case of *Griffiths v. Fleming*, however, the Judges went beyond this view, and were apparently prepared to hold that a husband, as such, possessed an insurable interest in his wife's life in the same way as a wife possessed an insurable interest in her husband's life—that such cases were not "within the mischief" contemplated by the Gambling Act. Life Offices generally may not consider it desirable to issue to a married man a policy on the life of his wife without enquiry as to the pecuniary interest involved, but the judgment in *Griffiths v. Fleming* would seem to confer legal sanction for such a transaction.

If the Insurance Company does not raise the question of

insurable interest it cannot be advanced by other parties in support of their claims to the proceeds of a policy. Thus in a case which was before the Scotch Courts in 1899 (*Hadden v. Bryden*) where there was a dispute as to who was entitled to the moneys under a policy, the Lord President in his judgment said—"It has been decided on grounds which are clearly valid that the Statute merely furnishes a defence to the insuring Company against a claim on the policy, but that if the Company waive the defence the question who is entitled to the proceeds of the policy, falls to be determined as if the Statute did not exist."

Money paid under a mistake of law cannot be recovered, and when a policy has been declared void through want of insurable interest, the premiums are forfeited to the Company, unless it can be shown that the assured was misled by the Company or its Agent into thinking that he had a valid insurable interest in the life assured.

#### MINORS.

A minor may insure his life, and the assurance is subject to the usual rule regarding contracts entered into by minors, namely, that it is subject to confirmation by him on attaining his majority. He cannot, however, demand the premiums back if he has had the benefit of the assurance, nor has the Company the right to void the contract on the ground of the minority of the assured. It would not, however, be possible for the Company to grant him a loan or pay the surrender value of the policy to him during his minority, but a paid-up assurance might be granted in respect of the value he had created by paying the premiums, and this could be surrendered when he attained full age. Of course continuance of the payment of the premium after age 21 is a confirmation of the contract by the assured.

#### BASIS OF CONTRACT.

The effect of a contract of insurance is to transfer a risk, or rather the consequences of a risk, from the one party to another, and it is, therefore, equitable that all information material to the risk possessed by the one should be disclosed to the other,



so that he should be in as favourable a position to estimate the nature and extent of the risk. It is consequently a contract, as the lawyers say, "*uberrimae fidei*" of the utmost good faith—requiring the utmost good faith between the parties. This is a principle which has been endorsed by the Courts times without number, and hardly a month passes without our receiving fresh confirmation of their intention to uphold it intact. As a result of this principle it follows that it is the duty of the proposer, not only to answer correctly all questions put to him by the Insurance Company, but also to volunteer any information material to the risk which the answers to the questions may not have brought out. As an example, I know of only one Company which includes in its forms a question designed to ascertain directly if the proposer indulges or contemplates indulging in aviation. But if an individual who went in for aviation, or intended to do so, proposed to an Office, he would be bound to disclose the fact to the Office, otherwise they would, upon coming into possession of the knowledge, be entitled, I should imagine, to relief from the risk.

The information furnished to an Insurance Company by a proposer takes the form either of what is known as a "representation" or a "warranty." The technical meaning of the term "representation" is that the information is true to the best of the proposer's knowledge and belief, whereas a "warranty" implies that it is actually true. Under the former it would be necessary for the Company, in order to void a policy, to prove that there had been a mis-statement or concealment of fact to the proposer's knowledge, whereas under the latter it would only be necessary to prove simply that there had been a mis-statement or concealment, a very much simpler matter. However, most Companies nowadays make it clear in their forms that all they seek is information to the best of a proposer's own knowledge, and moreover, the Courts are in the habit of construing the replies to the questions as representations only, unless there is very clear evidence that the actual textual truth of the reply is intended to be warranted. A difficult question has arisen on a few occasions in respect to fraudulent mis-statements in proposals where the Company's Agent, in his anxiety to present the case in a favourable light and enhance his prospect of securing his commission, has either suggested, or been aware of, the



suppression of some unfavourable information—in some instances the proposal form having been actually filled up in the handwriting of the Agent, although signed by the proposer. In a general way, of course, the principal is bound by the knowledge of his Agent, and this is the contention which has sometimes been brought forward in support of the validity of the policy. But one is thankful to say the Courts have usually taken a much broader and more commonsense view of the matter, and have stated that a man must be held personally responsible for the answers to which he puts his signature, and that the Agent in filling up the proposal form was acting as the Agent of the proposer,—the questions being questions to be answered by the proposer,—and not as the Agent of the Company. I am aware that there was a Court of Appeal judgment which seems at variance with what I have termed the usual view of Judges in these cases, but it has, I think, only been followed in one or two instances. Moreover, it is legitimate to differentiate this case (*Bawden v. London, Edinburgh, and Glasgow*) from the others, as the judgment seems to have been particularly based upon the question of the scope of the Agent's authority, as to which the Company advanced no evidence to define its limits, and the Court of Appeal therefore assumed—as it was quite fairly entitled to do—that the Agent had authority, not only to negotiate, but to settle the terms of a proposal, and that he had waived the fact that the proposer was suffering from a patent defect,—the loss of one eye,—and negotiated and settled with him on behalf of the Company the terms of a proposal against total loss of sight. A further point which I should consider differentiates this case from others, although I have never seen it referred to by commentators, was that the proposer, Bawden, in addition to possessing one eye only, was quite illiterate, being merely able to sign his name. He could not read, and less responsibility therefore attached to him for the correctness of the answers appearing above his signature than would have been the case had he been able to do so.

#### COMPLETION OF CONTRACT.

There is no specific enactment which calls for the issue of a policy to give effect to a Life Assurance contract, although the

Stamp Act, 1891, provides that a Company shall issue a duly stamped policy within 30 days after payment of, or taking credit for, a first premium, but, as this is a taxing Act, the provision probably would only be considered as having reference to the *stamping* and not to the *issue* of a policy. It is, however, universal to issue a policy, and this forms the evidence of the contract. Moreover, the issue of a policy by a Company, and its acceptance by the assured, reduces the contract into a contract in writing, and the advantage of this is that no terms, stipulations, or conditions can be read into the contract which are not contained in or referred to in the policy. Of course, the proposal form and the questions and answers upon which the contract proceeds are mentioned in the policy, and are therefore considered as embodied in it. But no plea that the policy did not contain the whole of the contract would be allowed in deciding the rights and privileges thereunder; such, for instance, as reference to statements in the Company's prospectuses, or promises, verbal or written, made at the time the assurance was effected. These might very properly—as was pointed out by Lord Lindley in a case which came before the House of Lords in 1906—be advanced in suing for rescission of the contract and the return of the premiums on the ground that the insured had been induced to enter into the contract by misrepresentation or in an action for damages, but if not specifically mentioned in the policy could not be read into it.

In ordinary cases a contract is complete when the bargain has been struck, and either party has the right to sue the other for specific performance of the contract. In the case of a Life Assurance contract this point would be reached when the proposal had been completed, and the Company had signified its acceptance of the risk. It is, however, the usual practice for Offices to make the payment of the first premium a condition precedent to the commencement of the contract, and their proposal forms and letters of acceptance usually contain a stipulation to that effect, the latter, moreover, usually reserving the right to decline the risk in the meantime. Such a stipulation, however, would probably debar the Company from suing for specific performance, by the payment of the first premium, if the proposer failed to complete, although they would no doubt be held entitled to any out-of-

pocket expenses, such as medical fee, etc., to which they had been put in connection with the accepted proposal.

If between the date of acceptance of the proposal and the payment of the first premium any new fact material to the risk becomes known to the proposer, or if his health or circumstances vary so as to render the risk in any way different from what it was when the proposal was accepted, it is his duty to communicate the information to the Office, otherwise the suppression would be liable to invalidate the contract.

The date of commencement of the assurance in cases where the payment of the first premium is a condition precedent to the contract is the date of payment of such premium, apart from any other agreement between the parties, as, for instance, to date back the assurance to save a birthday.

The wording of a policy being the wording of the Company, in the event of there being any ambiguity as to the meaning of any of its clauses or stipulations, the policy would under the usual rule of law be construed in the sense most strongly against the Company and favourable to the Assured.

#### AVOIDING THE CONTRACT.

In the event of the Company ascertaining that there had been any misrepresentation or mis-statement made to it when the assurance was effected, or a breach of any of the conditions of the policy subsequently, it is necessary for it to take immediate steps to assert its right to avoid or amend the contract; otherwise, by continuing to receive premiums without protest it might be held to have waived its right to forfeiture. An interesting case illustrating this danger came before the Courts a few years ago. A Life Office in 1887 issued a policy upon the life of a lady, payable when she should attain the age of 60, or at death if happening previously—at ordinary endowment assurance. In the proposal she was stated to be 41 years of age next birthday. The policy was subsequently assigned to a third party to secure a loan, although this point has no bearing upon the matter we are considering, as the assignee of the Assured could be in no better position than the Assured herself, in regard to the representations made by her to the Company when the assurance was effected. In 1897 it was

brought to the knowledge of the Company that the lady's age had been understated three years in the proposal. The Company, notwithstanding the error thus communicated to them, accepted the premiums for the two ensuing years, that is to say, 1898 and 1899. In the August of the latter year they wrote to the assignee under the policy, pointing out the error, and proposing that he should pay the difference in back premiums with compound interest thereon, and pay the correct premium for the real age in the future. This he declined to do, and tendered the original annual premium each successive year until March, 1904, when the life actually attained the age of 60 years, that is to say, three years before it was expected when the policy was effected that it would mature. He then called upon the Company to pay the policy moneys, and upon their refusing to do so on the ground that the policy was void, and the premiums forfeited, he sued them on the plea that by accepting the premiums for the two years, 1898 and 1899, after the mistake had come to their knowledge, they had elected to affirm the policy. He won his case, the Court holding that by accepting the premiums in 1898 and 1899 the defendants must be taken to have affirmed the policy as it stood; and that they were not entitled, as suggested by their counsel, to treat the policy as if it matured according to the date of birth originally given. (*Hemmings v. Sceptre.*)

Apart from a violation of the conditions of the policy, or through misrepresentation, an assurance may become void on the grounds of public policy. Such cases are where the life dies by sentence of law, by self-destruction when in sound mind, or as the consequence of some criminal violation of the law, such as taking part in a duel or prize fight. It is similarly against the law that a murderer should benefit by his criminal act, and if he would have been entitled to receive the moneys payable under a policy on the life of the insured person, he and those claiming through him would be debarred on the grounds of public interest from recovering. (*Cleaver v. Mutual Reserve Fund.*)

#### ASSIGNMENTS.

The property comprised in a life assurance policy is a very abstract kind of property. What is it the Assured secures from the Company when he effects his policy and pays his premium?



It is the right to recover a certain sum on the happening of the event assured against. Property of this description is called a "chose in action," that is, a thing of which one has not got the actual possession, but has a right to bring an action at law to recover in certain eventualities. Owing, however, to the method of calculating premiums, a life policy, after it has been in force a few years, mostly acquires a surrender value, and consequently becomes of immediate positive value, either as a security upon which to borrow or to sell outright. The original view of the law was that it was undesirable to allow a mere "right of action" to be sold, and until less than 50 years ago there was no legal sanction for the assignment of a "chose in action." Policies were, however, none the less assigned before that period, and, where it was necessary to bring a suit to enforce payment, the difficulties were got over by the suit being brought in the name of the legal owner on behalf of the equitable holder, the assignee—the intervention of a Court of Equity, if necessary, being invoked to compel the legal owner to lend his name for this purpose. In 1867, however, an Act was passed entitled the Policies of Assurance Act, enabling assignees of Life Policies to sue in their own names, and thus avoid the cumbersome procedure of the earlier method. The third section of that Act, however, declares that no assignment of a life policy shall confer on the assignee, his executors, administrators, or assigns, any right to sue for the amount of such policy until a written notice of the date and purport of such assignment shall have been given to the Assurance Company; and the date on which such notice shall be received shall regulate the priority of all claims under any assignment; and a payment made *bonâ-fide* by the Company before the date on which such notice shall have been received by the Company shall be as valid against the assignee as if the Act had not passed. The Act, moreover, requires that every Insurance Company must on every policy specify its principal place or places of business at which notice of an assignment may be given.

This Act, in addition to facilitating the dealing with Life policies by way of assignment, is a valuable protection to Insurance Companies against the claims of an assignee who had not given notice of his assignment, and enables the Companies to deal with a difficulty which sometimes arises when a policy



becomes a claim and the policy itself cannot be produced owing to its having been lost or destroyed. The policy is, as I have already stated, merely the *evidence* of the contract, but the fact that it is not forthcoming raises the suspicion that it may have been assigned or deposited as a security. With, however, the immunity against the claims of an undiscovered assignee guaranteed by the Policies of Assurance Act, the Company can proceed to settle on the basis of the title to the assurance as appearing in its books, although it is usual to require an indemnity from the parties to whom the policy moneys are paid against any further claims, demands, or expenses which the Company might incur under the policy.

When, however, we are dealing with the case of a surrender or a loan under a lost policy, we are perhaps not on such firm ground. The Act does not actually say so, but it might be considered that the "any payment made *bond-fide*" mentioned in the Act meant only any payment made when the policy naturally matured for payment as a claim—especially in the case of a policy which bore no reference to surrender or loan thereon—and an assignee might come forward with the policy and contend that, although he had not actually given notice, he intended to do so before the policy became payable, and that the Company was negligent in paying the surrender value without production of the policy. Still, with the existence of strong Insurance Corporations willing to issue indemnity bonds, this difficulty can be overcome in a practical manner by requiring the stronger indemnity of a Corporation instead of the personal indemnity of the person to whom the surrender value or loan is paid.

The assignee of a policy is in no better position than the Assured himself in relation to the contract with the Company, and is liable to all the defences which the Company can raise against the Assured. Thus, if the policy is void as against the Assured on the ground of fraud or misrepresentation or contravention of the conditions, it is void also as against the assignee. If, however, the Company should become aware of any circumstances which, in their opinion, affect the validity of policy, it is their clear duty to acquaint the assignee immediately, so that he may take any steps which may be open to him to secure himself. Similarly, if a notice of assignment discloses anything which would lead to the belief that an

assignee has been deceived in accepting the assignment, the Company is bound to inform him of the real circumstances.

It is usual for the surrender of a life policy to be effected by a simple receipt for the amount of the surrender value being taken on the back of the policy with a statement embodied that the policy is declared null and void. There is no need for a formal assignment, seeing that the only thing to convey is a right to sue, and the Company does not require to be invested with the right to sue itself. This is also the reason why some Companies have dispensed with a full mortgage deed conveying the policy in connection with most of their loans on security of life policies, contenting themselves with a deposit of the policy and an equitable mortgage, a simpler and less expensive form of security, containing a clause empowering the Company to cancel the policy if the premiums and loans interest are not paid when due.

#### BANKRUPTCY.

Upon the bankruptcy of a life policy holder all his interest in the assurance vests in his trustee along with his other property, and the Company thereupon stands in the same position to the trustee as it did to the policy-holder, in regard to the payment of a claim, or surrender under the policy.

It has been thoroughly established that in England (although it is not so in Scotland and Ireland, where bankruptcy is supposed to be a matter of common knowledge), it is necessary that notice should be served upon an Insurance Company of the bankruptcy of one of its policy-holders to secure protection for the trustee's rights, and the Office would be covered in respect of any *bonâ-fide* dealing with the policy for value, such as surrender or loan, in the absence of notice. The Company must, however, be on its guard against what is known as constructive notice of bankruptcy—that is to say, any intimation which might convey to it the fact that a man had committed an act of bankruptcy. An assignment of one's assets to a trustee for the benefit of creditors is an available act of bankruptcy, for at any time within three months of the date of the deed of assignment a petition in bankruptcy, based upon the deed, may be presented; and it has been held that any payment made to the trustee under such a deed within the

three months is not protected as against the trustee in bankruptcy in the event of the debtor being subsequently declared a bankrupt during that period. Consequently, it is not safe for a Company to pay the surrender value of a policy to a trustee under a deed for the benefit of creditors until the expiry of this period of three months from the date of the deed, and then only provided it has not received notice of the policy-holder's bankruptcy.

There are many interesting questions connected with bankruptcy and its effect upon life assurance matters, but I have not time within the limits of this paper to discuss them. I should, however, like to advert to one other point before dismissing the subject. That is the question of a policy effected on the life of an undischarged bankrupt. All property acquired by a bankrupt pending his discharge is at the disposition of his trustee in bankruptcy, and consequently in the event of a policy effected by an undischarged bankrupt becoming a claim, the monies payable thereunder fall to be paid to the trustee and not to the assured's personal representatives. But it has been held that, in the event of the assured assigning the policy, *bonâ-fide* and *for value*, to a third party, whether the latter had knowledge of the bankruptcy or no, in the absence of any intervention on the part of the trustee, the claim of the assignee to the policy monies will be upheld. This constitutes the difference between property acquired after the bankruptcy and property acquired before the bankruptcy. Over the latter the bankrupt loses all rights and control, and cannot deal with it in any shape or form unless reinvested in it by assignment from the trustee. The former he can deal with, but it must be *bonâ-fide* and for value; no voluntary settlement or gift would prevail against the claim of the trustee. The distinction would seem to give sanction to an Office paying the surrender value of a policy to an undischarged bankrupt if it had been effected *after* his bankruptcy, provided the trustee did not intervene to prohibit the surrender.

#### M. W. P. Acts.

I mentioned in the early part of this paper the Married Women's Property Acts, 1870 and 1882. These Acts have been of great benefit in enabling a man to make a family

provision by way of life assurance, which is exempt from the claims of his creditors. Under Section 11 of the Married Women's Property Act, 1882, "a policy of insurance effected by any man on his own life, and expressed to be for the benefit of his wife, or of his children, or of his wife and children, or any of them, or by any woman on her own life expressed to be for the benefit of her husband, or of her children, or of her husband or children, or any of them, shall create a trust in favour of the objects therein named, and the monies payable under any such policy shall not, so long as any object of the trusts remains unperformed, form part of the estate of the insured, or be subject to his debts. Provided that if it shall be proved that the policy was effected and the premiums paid with intent to defraud the creditors of the assured, they shall be entitled to receive out of the monies payable under the policy a sum equal to the premiums so paid." The section goes on to state that the assured may either by the policy or a memorandum under his hand appoint a trustee or trustees of the monies payable under the policy, but that in default of any such appointment of a trustee, the policy, immediately upon its being effected, will vest in the insured and his or her legal personal representatives in trust for the purposes named.

The appointment of a trustee or trustees must be notified to the Office, and the Act declares that in default of any such appointment, or in default of notice to the Insurance Office, the receipt of the legal personal representative of the Insured shall be a discharge to the Office for the sum secured by the policy. This provision, by which the legal personal representative—that is, the executor or administrator of the assured—automatically becomes a trustee under a policy effected under the Act, is a great improvement over the provision in the earlier Act of 1870. Under the 1870 Act it has been declared by a judicial decision that the trustee for the purpose of a policy effected under the Act *must* be appointed by the Court, a matter which causes sometimes considerable expense. As, however, the Act of 1882, although it repealed the Act of 1870, as from the date of its coming into force on 1st January, 1883, was not retrospective in its action, it is still necessary to deal with policies issued under the 1870 Act in accordance with the provisions of that Act.

There is one expression used in the section of the Act which



I have quoted, which might with advantage have been made more explicit, and that is the expression "so long as any object of the trust remains unperformed." We know of one case where the object of the trust was declared to be incapable of performance on the ground of public policy—*Cleaver v. Mutual Reserve Co.*—the case of the policy effected by Mr. Maybrick for the benefit of his wife—she was convicted of murdering him, and the Courts held that the trust in her favour was incapable of performance on the ground of public policy, and that the insurance monies thereupon formed part of his estate. But it would seem that the death of the wife would not render the trust incapable of performance, although the object of the trust is the making of a provision for her, and one would hardly think she needed a provision in the shape of insurance money after death; that, however, seems to be the effect of a legal decision bearing on the point (*Prescott v. Prescott*). Happily, the difficulty can be got over by adding in the policy such words as "if she survive," thereby limiting the trust in her favour to that event, but if the policy is simply stated to be for the benefit of the wife, the benefit would apparently pass upon her death leaving her husband surviving, to *her* heirs, which would not preclude the possibility of a man setting out to make a provision for his wife, and concluding by involuntarily endowing his mother-in-law.

A policy effected under the Married Women's Property Acts, since it comprises a trust, cannot be as readily dealt with as an ordinary policy effected by a man for his own use and benefit. Consequently, it is necessary to exercise great circumspection in connection with applications for loans on security thereof, for payment of the surrender value, or for the issue of a paid-up assurance in lieu of the existing policy. This is more particularly the case where the policy is for the benefit of children, or wife and children. If the beneficiaries are all named in the policy, the difficulty can be overcome, if they are of full age, by taking the concurrence of them all, but more frequently than not the children are not named, indeed the children whom the assured intends to benefit when effecting this assurance are often not born when the policy is issued. In such cases the policy could not be dealt with unless all the children are of age, and there can from the circumstances of the case be no more. Mostly the wife is named in the policy if



a beneficiary, but if not it must be borne in mind that it has been decided that a policy effected by a man, and stated merely to be for the benefit of his wife, means not only the benefit of the wife *in esse* at the time the policy is effected, but any future wife. In any event, it would be permissible for the Company to grant a loan under one of these trust policies for the sole purpose of maintaining the assurance in force.

#### GRANTS OF REPRESENTATION.

There is one more matter to which I wish to refer before I close this paper, and that is with regard to the payment of claims under life assurance policies. When a policy becomes a claim by death, provided it is unassigned and does not come within the category of policies to which I have just referred, policies effected under the provisions of the Married Women's Property Acts where a trustee has been appointed, the monies payable thereunder are payable to the legal personal representatives of the assured, that is to say, to the executors or executor if he has left a will, or to his administrator if he has died intestate. The former, the executors, distribute the estate in accordance with the directions in the deceased's will, and the latter in accordance with the law as to distribution of intestate's estates. I have been a little precipitate in limiting the case of an administrator to instances where the life has died intestate only, for there are other occasions upon which a grant of administration has to be applied for. In the somewhat rare cases where a life has made a will, but has omitted to nominate executors, or all the executors have predeceased the testator—then a grant of administration with the will annexed "*cum testamento annexo*" is required; or where the only executor nominated is a minor, administration "*durante minore*"; or where the executor is abroad, an administrator to act during his absence, administration "*durante absentia*." Also cases in which a lawsuit is being brought to determine who is the proper person to administer the estate, an interim administration "*pendente lite*," as it is called, is granted.

It is the custom of Insurance Offices to call for the signatures of all the executors to a discharge of a life policy, and they are quite entitled to do so, for it would be necessary for all of them to join in any suit against the Company, but it is doubtful if

this is really necessary, as, according to Williams in his "Principles of Personal Property," any one of the executors may perform without the concurrence of his co-executors all the ordinary acts of administration, such as giving receipts, making payments, and selling and assigning the property. In the case of a payment to Trustees, however, it is absolutely necessary to get the signatures of all the Trustees who are capable of acting. A Trustee cannot devolve his duties and responsibilities upon any one else, and I would also draw attention to the special requirements in connection with payments to Trustees. The payment must either be made into a banking account in the joint names of all the trustees, or to a banker, or solicitor, on their authority. They cannot authorise one of their number to receive the money, or, in fact, any person other than a banker or a solicitor.

The office of executor is transmissible, that is to say, it passes to the executors of the executor, or of the surviving executor, if there have originally been more than one appointed, and the power of dealing with the estate consequently passes with the office; but the office of administrator is not transmissible, it is a purely personal grant. Consequently, if an administrator dies before the whole of the estate is administered, a further grant has to be applied for to the Court, which, when granted, is termed "*administration de bonis non administratis*," or shortly "*administration de bonis non*." Similarly, when the executor or last surviving executor of a will dies intestate, a grant of "*administration de bonis non*" has to be granted, only, of course, the distribution of the estate is in this case proceeded with in accordance with the directions in the will. The circumstances under which we usually come across grants of administration "*de bonis non*" are where the life assured was not the policy-holder, the policy having been either effected by or assigned to another person. The policy-holder may have predeceased the life many years, and his administrator or surviving executor have also died before the policy became a claim. Such, for instance, as a policy effected by a married woman on the life of her husband to obtain the benefit of the Married Women's Property Act. The wife predeceases the husband, and, as is often the case, dies without making a will. By law her property all passes to her husband, but he probably does not

trouble to take out administration of his wife's estate and assign the policy to himself as heir, or in some other way reduce it into his possession. When he dies the policy would represent a portion of his wife's estate which had not been administered, and a grant of administration *de bonis non* would have to be produced to enable the claimant to the policy monies to give a good discharge.

I think the foregoing substantially exhaust the different grants of representation in England, and it is the person appointed under one or other of these grants who is the proper party to give an Assurance Company a legal discharge. It is, I believe, customary for some Companies to examine the copy of the will attached to a probate to see if there is a specific bequest of the policy therein, and if so, to endeavour to obtain the concurrence of the legatee in the discharge; but they cannot insist upon this requirement if the executor demurs, as he is the legal creditor for the policy monies armed with the authority of the Probate Court, and it is no concern of the Insurance Company to see that he faithfully carries out the directions of the will of the deceased.

Seeing that our Liverpool Institute students have only English Law now to deal with, there is no need to enter into the question of grants of representation in Scotland. In Ireland they are the same as here. A grant of representation made in one country only applies to property in that country, and policies of assurance granted by an English Office, that is an Office *having no other domicile* than in England, constitute English property. They represent debts due in England. Before it is operative in England a grant of representation by either a Scotch or Irish Court requires to be resealed in England. To obviate this difficulty to payment under their policies some of the English Companies who operate under a private Act of Parliament have had a clause inserted in such Act to the effect that payment may be made under their policies on production of a grant of representation, whether made in England, Scotland, or Ireland. Mr. Barrand states that as far as he can ascertain the practice of calling for the resealing in England of Scottish confirmations and Irish probates is now the exception rather than the rule, and that it is not easy to see that there is much real risk in disregarding the formality. It seems clear from cases which have been decided in the Courts

that a payment under a grant in another part of the Kingdom would be a good answer to a claim made subsequently in England by a person claiming under an English grant. The question of Estate Duties in this connection does not arise, as they go into the Imperial Exchequer, whether collected in England, Scotland, or Ireland. I have not studied carefully the Home Rule Bill which is at present before Parliament, but perhaps, when it becomes law, and Ireland sets up a separate Exchequer, we shall have to revise our views in the matter.

When a policy is for a small amount, and constitutes practically the whole estate left by the assured, a Company is sometimes asked to pay the claim without requiring a grant of representation. This request cannot be agreed to, as the Company might in such circumstances become liable for the amount of the Estate Duties on the policy monies on the ground that it had acted as executor *de son tort*, that is to say, had assumed at its own peril the duties and responsibilities devolving upon an executor, including the payment of Death Duties on the estate.

There are, however, cases in which a Company can dispense with the production of English representation, and that is where the policy-holder has died *domiciled* outside the United Kingdom. Section 19 of the Revenue Act, 1889, provides that "where a policy of life assurance has been effected with any Assurance Company by a person who shall die domiciled elsewhere than in the United Kingdom, the production of a grant of representation from a Court in the United Kingdom shall not be necessary to establish the right to receive the money payable in respect of such policy." It will be noted that the Colonies of the British Empire are included in the scope of this section of the Act as well as all Foreign Countries, the words of the section being "domiciled elsewhere than in the United Kingdom." The difficulty in determining whether the facilities granted by the section are applicable in any particular case is, however, in the expression "*domiciled*." The legal meaning of the word domiciled as near as I can express it is "The place where one habitually resides, and which he looks upon as his home as distinguished from places where one resides temporarily or occasionally." Thus, a person living abroad for the purposes of his business, but apparently with an eventual intention of

returning to England, could not be deemed to be domiciled abroad, and his policy would not, therefore, come under the exemption conferred by the section.

#### DEATH DUTIES.

Since the Revenue Act, 1889, came into operation, the Finance Act of 1894 has been passed, imposing duties on all property in the United Kingdom passing at the death of a person, and it is evidently not the intention of the Revenue authorities that the policy moneys payable under a foreign or Colonial grant of representation, if they represent English estate, should escape the payment of death duties. One of the Insurance Companies recently sought a general ruling on the subject from the Inland Revenue authorities, and was informed that "the Commissioners of Inland Revenue are advised that Section 19 of the Revenue Act, 1889, does not exempt the policy moneys from liability to estate duty under the Finance Act, 1894; that under Sec. 9 (1) of the Act, the Crown has a charge on the moneys to the extent of its claim, and that an injunction may be obtained on the part of the Crown to restrain the Insurance Company from paying over so much of the policy moneys as represent the duty, until the satisfaction of the Crown's claim," and the communication went on to request that before any policy moneys were paid over in such circumstances, due notice should be given to the Inland Revenue authorities, together with full particulars of the case.

Of course, I have been referring all along to policies assumed to have been executed and issued in England which form English contracts, and, therefore, English assets. A policy executed abroad by attorneys of the Company who have the power to make contracts in its name and settle claims on its behalf is carried out in accordance with the laws of the country where payment is made.



# THE CHARTERED INSURANCE INSTITUTE.

## EXAMINATIONS, 1913.

### FIRE BRANCH.

Part II., Subject A.—BUILDING CONSTRUCTION AND SYSTEMS OF  
HEATING AND LIGHTING.

*Two-and-a-half hours allowed for this paper.*

#### QUESTIONS.

*Marks.*

1. Define—

- (a) Lantern attic.
- (b) Brick noggin.
- (c) Purlins.
- (d) Quoins.
- (e) Sleepers.
- (f) Stanchions.
- (g) Timber louvres.
- (h) Weather boarding .. .. . 20

2. Describe—

- (a) Reinforced concrete.
- (b) Wired glass.
- (c) Asbestos .. .. . 5

3. Give elevation sketches of the following kinds of  
masonry—

- (a) Uncoursed rubble.
- (b) Coursed rubble.
- (c) Ashlar rubble.
- (d) Four courses of English brick-bond showing  
Queen-closers .. .. . 15

4. Is it possible to construct a wood floor in such a way as  
to be considered “fire-resisting”? If so, describe the  
method, and why it is “fire-resisting” .. .. . 15

5. Define—
- (a) Single floors.
  - (b) Double floors.
  - (c) Framed floors    ..    ..    ..    ..    .. 10
6. Give sketches of and terms applied to wood roofs necessary for the following spans—
- (a) Not exceeding, say, 10 feet.
  - (b) Exceeding, say, 10 feet, but not exceeding 18 feet.
  - (c) Exceeding, say, 18 feet, but not exceeding 30 feet.
  - (d) Exceeding, say, 30 feet, but not exceeding 45 feet    ..    ..    ..    ..    .. 10
7. Compare the relative values of the following, from a fire risk standpoint—
- (a) Slates.
  - (b) Tiles.
  - (c) Corrugated iron    ..    ..    ..    ..    .. 5
8. Draw (not necessarily to scale) part of an 18-in. wall, showing chimney breast and fireplace, and supposing the floor-joists to run at right angles to chimney breasts, show how they would be trimmed    ..    .. 20
9. State categorically (without explanation) some of the undesirable features which should be avoided in the construction of a building in relation to the fire risk 20
10. Explain the construction and working of a petrol gas plant    ..    ..    ..    ..    ..    .. 15
11. (a) Why does a high-pressure hot-water apparatus produce more heat than a low-pressure?
- (b) Describe the essential differences between a “high-pressure” and a “medium-pressure” apparatus    .. 25
12. Describe as fully as you can the essential details and precautions to be observed in the construction of a “fire-resisting” building as regards—
- (a) Walls.
  - (b) Floors.
  - (c) Roofs.
  - (d) Protection of structural metal work    ..    .. 40

FIRE BRANCH.

Part II., Subject B.—CORRESPONDENCE.

*Two hours allowed for this paper.*

QUESTIONS.

1. Reply to the following letter received from an Agent:—

“I have an opportunity of securing the insurance  
“of a Malster subject to rate, but I am met with a  
“difficulty upon the question of the average clause.  
“My friend has three maltings separated from each  
“other by a roadway, and he desires to insure the  
“contents of all in one sum of £20,000 without  
“average. What arguments can I bring forward to  
“overcome his objection to the clause and what do  
“you advise in the matter” .. .. . 30

2. How would you reply to the following letter from an Agent:—

“I am glad to advise you I have secured a good  
“insurance and have to-day given cover for £5000  
“at transfer rates. The risk is a boot warehouse  
“in Leather Lane, Leicester, and the name of the  
“insured Wyrley and Coy.”

The Company finds it has a guarantee of £1000 on the risk, and its ordinary retention on the class is £2500 20

3. Reply to the following received from an Insured:—

“I beg to give you notice I am removing my  
“furniture on the 3rd proxo.; part to Brown and  
“Co.’s depository, Croydon, part to my new house at  
“Epsom, and part to the Croydon Auction Mart for  
“sale on the 7th idem. Please hold me fully covered” 25

4. A Company has a guarantee on M‘Tavish’s Brewery, Burton, at 2s. 6d.%. Reply to a letter from its Burton Agent reading:—

“I have to-day been asked to submit a quotation  
“for M‘Tavish’s Brewery, and as I already have two  
“brewery insurances on my books for you at 2s. I  
“have named this rate, which I trust you can con-  
“firm. The risk in the present case is certainly  
“not more than in those rated at 2s.”

Upon enquiry the Company find the Office they guarantee have not offered to reduce the rate .. .. . 15

5. Deal with a letter from an Insured grocer reading :—

“I am sorry to have to give you notice of a somewhat serious fire which took place at my shop yesterday early in the afternoon. I think the damage may amount to about £300. Please send down at once.”

The shop is in the country and the assessor could not arrive till the evening of the day the letter arrived . . 20

6. An Agent writes :—

“I find a difficulty in meeting the competitors of the X Coy., which offers its Insured a return of the 6th premium if no claims have been made during the preceding five years. Can you help me to meet this class of competition?”

Send a suitable reply . . . . . 15

7. An illiterate farmer writes to the Company stating he has had a colt, which he values at £20, struck by lightning, and he claims the sum named from the Company. He says he has had the carcase buried.

Write a suitable letter acknowledging the claim . . 15

8. Reply to a letter from an Insured :—

“I have, as you are aware, had my house and its contents insured with you for twenty years, and I am pleased to say I have had no cause for complaint in the way you have met me upon the few occasions when I have had to make slight claims against you. I have, however, recently received an offer on behalf of Lloyd’s which seems to merit my careful consideration, and without actually giving you the terms of the offer, I may say the charge is lower than yours and the terms seem more liberal. In particular, Lloyd’s are prepared to pay in the event of a loss values agreed upon beforehand. I do not wish to leave your Office, but I must ask you if you can compete against the present offer.” . . 20

9. An Insured who has a piano factory writes as follows :—

“I have only just noticed that my Fire Policy contains the following clause—

‘Warranted that all shavings and other refuse be swept up and removed from the premises every day.’

“This makes the policy quite useless to me, as we, of course, never sweep up on Sundays and Bank Holidays, and, further, special occasions may arise when we have to close the factory early without removing the shavings and refuse.”

Write a suitable letter in reply . . . . . 20

Marks.

10. Write the letter or letters you consider necessary in the following case :—

Agent A writes :—

“I shall be glad if you will transfer to my agency  
 “the insurance of Mr. X. under Policy No. 143,782,  
 “£2500 : premium £5. It is at present with you  
 “through your Agent, Mr. B., but Mr. X. wishes me  
 “to have it in future” .. .. . 20

### FIRE BRANCH.

Part II., Subject C.—COMMON HAZARDS.

*Two-and-a-half hours allowed for this paper.*

#### QUESTIONS.

1. Give the names of any ten different features of risk from which common hazards may be said to arise .. .. 10
2. Describe as briefly as possible the hazards arising from  
 (a) acetylene gas lighting ; (b) defective construction 20
3. Compare the relative hazards of lighting by paraffin lamps and incandescent electric lamps .. .. 20
4. State briefly the precautions which should be taken in fixing a hot-water boiler and furnace in the basement of a non-fireproof building .. .. 15
5. What objections do you see to the proposal to erect a large retail shop with a skylighted roof and well hole through all floors? .. .. 15
6. It is desired to light artificially a building in which oils are stored, including a quantity of petrol. What arrangements would you recommend? .. .. 20
7. To what feature of hazard in connection with a gas engine is our attention always directed, and why? .. 15
8. In what way does cubical contents affect the fire risk? .. 15
9. What do you understand by exposure hazard? .. .. 20
10. State the precautions you would suggest regarding the position, construction, and arrangements of a petrol store for 100 gallons of spirit .. .. 15



11. What additional risks does night work cause? .. .. 15
12. A builder having a large wood-working shop with power-worked machinery, gas lighted, warmed by hot water pipes, and provided with fire buckets, desires to give written instructions to his foreman regarding orderliness and safety from fire. Give your idea of what such instructions should contain .. .. 20

### FIRE BRANCH.

Part II., Subject D.—PLAN DRAWING.

*Three hours allowed for this paper.*

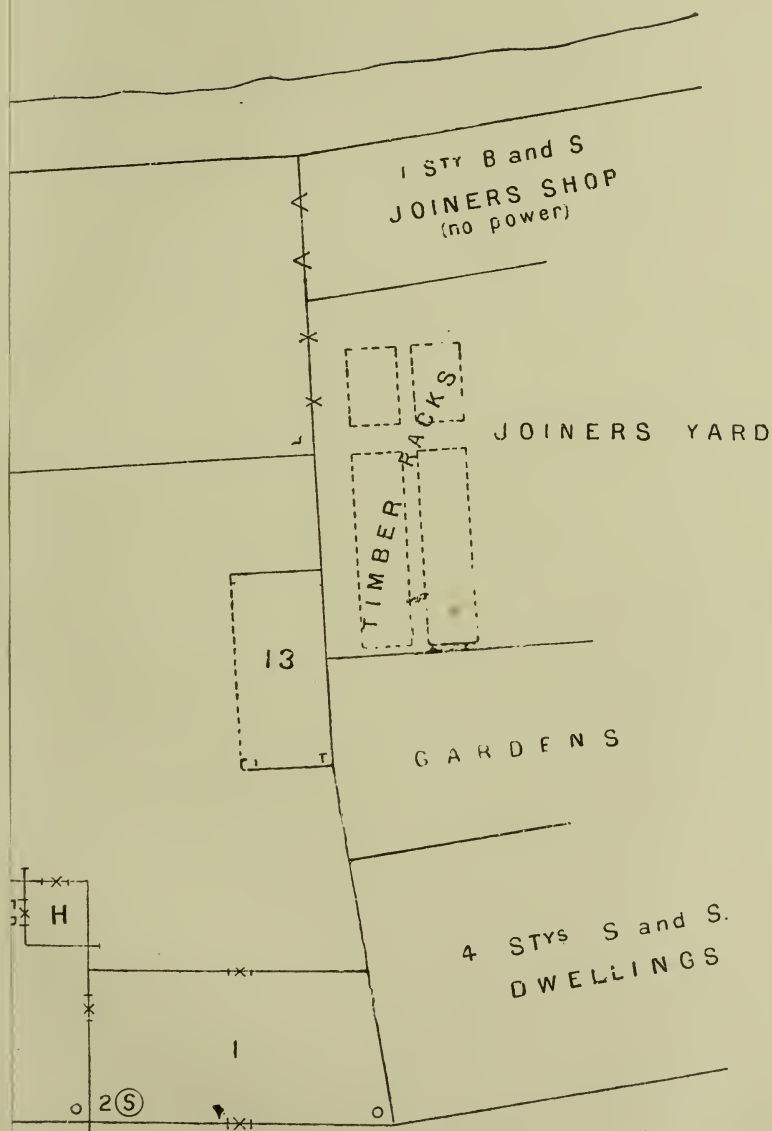
#### INSTRUCTIONS.

The accompanying sketch to a scale of 30 feet to 1 inch has been made by a surveyor when inspecting a risk, and is correct as to measurements.

1. The Candidate is required to re-draw and finish in ink to a scale of 40 feet to 1 inch, applying the methods laid down under the heading "Symbols and Abbreviations" in the Syllabus for 1913 of the Chartered Insurance Institute .. .. 150
2. Write a short description of the buildings, so far as this is possible, from the symbols used .. .. 50

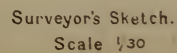
*N.B.*—Question 2 must be attempted.

ANY.



Surveyor's Sketch.  
Scale 1/30

## NORWICH.



FIRE BRANCH.

Part II., Subject E.—POLICY DRAFTING AND ENDORSEMENTS.

(a) PUBLIC PROPERTY. (b) SOAP WORKS.

*Three hours allowed for this paper.*

100 marks are applicable to each Part (a) and (b).

Commence each Part (a) and (b) on a separate sheet of paper.

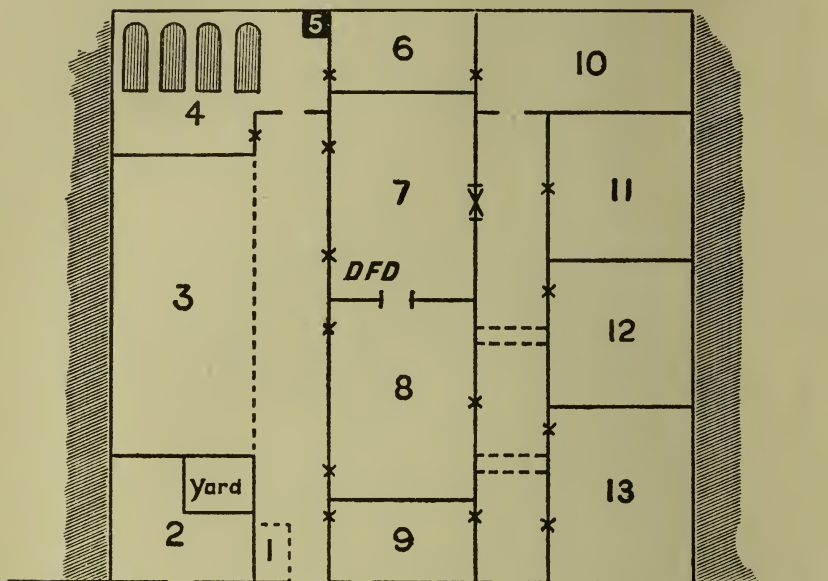
(a) PUBLIC PROPERTY.

1. Draft a Policy, in the name of the Mayor and Corporation of the Borough of Sutton, on the Building and Contents of the Town Hall, showing the divisions of amount you think it necessary to obtain. The Town Hall comprises Council Chamber, Concert Hall (with Stage), Committee Rooms, and Offices of the various Corporation Departments, and contains, in addition to the usual Furniture and Fittings, a few valuable Pictures.
2. The Town Clerk intimates that permission is required for occasional theatrical representations (not exceeding 12 in any one year) to be given in the Concert Room. Draft a suitable endorsement.
3. From a Plan and Report of an Electricity Generating Station comprising Offices, Boiler and Economiser House, Dynamo House and Battery Room, all communicating, prepare a draft specification for submission to the Council.
4. An intimation is received that it is intended to substitute motor traction for horse haulage in the Cleansing Department, that a cart shed will be used to house petrol-driven motor wagons, and that the stock of petrol will be kept in a pit in the open yard. Draft a suitable endorsement giving effect to the change, assuming the Corporation have agreed to all the arrangements and precautions you have suggested.

(b) SOAP WORKS.

Draft a complete Schedule from the following Plan and Report leaving blank the sums insured, but indicating the divisions you would ask for and the Warranties you propose to apply.

SOAPERIES LIMITED, of the Washington Soap Works,  
Smellie Street, Leicester.



1st March, 1913.

Plan No.	Construction.		Height.	DESCRIPTION.
	Walls.	Roof.		
1	C.I.	C.I.	1	Gate Office (one securely erected pipe stove) containing Weighbridge mechanism.
2	B	S	2	Foreman's Dwelling-house.
3	Tr	Felt	1	Store for Tallow, Oils, Alkali, and other raw materials.
4	B	S	1	Coal Store and Boiler House (containing four horizontal Boilers and Economizer). No drying. Communicating with No. 6.
5				Chimney Stack.
6	B	S	1	Steam Engine House (containing one compound horizontal steam engine and dynamo for lighting purposes). Communicating with No. 10.
7	do.	do.	2	Ground Floor. Frame room (containing 60 soap frames), slabbing and cutting place by hand. Liquid soap is conveyed to the frames by wooden spouts from the coppers the bottoms of which project from the floor over.



Plan No.	Construction.		Height.	DESCRIPTION.
	Walls.	Roof.		
7	B	S	2	<i>First Floor.</i> Soap Boiling Floor (containing three 10-ton steam-heated soap coppers and lye tanks. <i>Gallery.</i> One double steam-driven Crutcher. Communicating by openings each protected by double armoured doors with No. 8.
8	do.	do.	3	<i>Ground Floor.</i> Soap shredding, drying (in steam-heated compartments partitioned off with timber), milling, plodding, and stamping place. <i>First Floor.</i> Wrapping and Packing Department. <i>Second Floor.</i> Wrapping and Packing Department and store for cardboard boxes (which are bought ready made) and wrapping papers. NOTE.—A brick-built electric hoist connects all floors.
9	do.	do.	3	<i>Ground Floor.</i> Public and Private Offices (open fires only). <i>First Floor.</i> Laboratory (gas bunsen burners only) and Store for Perfumes. <i>Second Floor.</i> Store for Stationery and old Books.
10	do.	do.	1	Mechanics' Shop (containing various power-driven metal-working machines and one smith's hearth), also used for the storage of mill furnishings and spare parts of the Machinery throughout the Works.
11	C.I.	C.I.	1	Glycerine Recovery House (containing tanks for spent lye and crude glycerine, filter press and one vacuum Glycerine Evaporator) and Store for Muriatic Acid in carboys and recovered Salt.
12	B	S	2	<i>Ground Floor.</i> Sawmill, in which there is a 2-colour machine for printing boxes—hot branding is not done. <i>First Floor.</i> Box-making shop and Store for box timber and empty boxes.
13	do.	do.	2	Store for finished stock and advertising materials.

*Light.*—Incandescent Electric Light. *Heat.*—Exhaust Steam for Warmth. Live Steam for Trade Processes.

Hard Soap for Domestic and Toilet purposes only made, from Tallow, Cocoa-nut Oil, Palm Oil, and Resin; all materials bought ready for use.

*Open Gangways* connect first floor of No. 8 with that of Nos. 12 and 13.

*Appliances.*—2-gallon Chemical Extincteurs in Nos. 7 and 8 in accordance with usual scale. 5% Discount allowed.

## FIRE BRANCH.

Part II., Subject F.—PROCESSES OF MANUFACTURE.

(a) COTTON, UP TO AND INCLUDING WEAVING. (b) SOAP.

*Three hours allowed for this paper.*

Candidates must commence their replies to Parts (a) and (b) on separate sheets of paper, and must satisfy the Examiners in both Parts to obtain a Pass.

## QUESTIONS.

## (a) COTTON.

	<i>Marks.</i>
1. Give a brief description of the process of Carding ..	30
2. What are the names of the processes for Opening and Cleaning Cotton? .. .. .	15
3. State in sequence the processes after Carding and prior to Spinning, and describe shortly each process. Include Combing .. .. .	30
4. Name the processes through which yarn passes in a Cotton Manufacturing Mill before being woven ..	15
5. Describe Winding and Beaming .. .. .	20
6. (a) What are the three principal parts of a Mule Spinning Frame?	
(b) What is the essential difference between Mule Spinning and Ring Spinning? .. .. .	30
7. For what purpose is a Crighton Opener used? ..	20
8. State briefly the fire hazards—	
(a) of a Cotton Spinning Mill.	
(b) of a Cotton Weaving Factory .. .. .	40

## (b) SOAP.

1. Name the principal materials used in soap making ..	20
2. State briefly the methods employed for the extraction of :—	
(a) Tallow from animal fats	
(b) Oil from seeds .. .. .	30
3. What is lye? .. .. .	10
4. Describe in proper order the processes of making hard soap .. .. .	50
5. In what respects does soft soap differ from hard soap? ..	10
6. How are transparent soaps made? .. .. .	10
7. Describe the processes of the recovery of glycerine from spent lye .. .. .	30
8. What are the principal Fire hazards of a Soap Works, and what precautions should be taken to minimise same? .. .. .	40

## FIRE BRANCH.

Part III., Subject A.—AVERAGE CLAUSES AND LOSS  
APPORTIONMENTS.*Two-and-a-half hours allowed for this paper.*

(Fractions of Pounds to be omitted.)

## QUESTIONS.

*Marks.*

1. State briefly the methods by which apportionments are made in usual practice—
  - (a) Between two specific non-concurrent policies.
  - (b) Between two average policies.
  - (c) Between a specific and an average policy.
  - (d) Between an average and a floater of greater range with both conditions of average .. 20
2. What are the customary interpretations of the term “rateable” in the contribution clause? .. 15
3. What is meant by an Independent Liability apportionment? .. 15
4. Describe the working of the three-fourths Average Clause, and explain how the Insured benefits by it as compared with the *pro rata* Average Clause .. 15
5. In accordance with the usual practice of the Offices, how would the following loss be paid? Give your reason.  
 Office X insures Stock-in-trade for £600, and Furniture and Utensils for £100.  
 Office Y insures Stock-in-trade, Furniture, and Utensils for £200.  
 The loss to Stock-in-trade is £560.  
       ,, to Furniture .. £100.  
       ,, to Utensils .. £80.  
 Suggest an alternative apportionment to the usual one, and comment upon it .. 25
6. Apportion the following loss—  
 Office A (*pro rata* Condition of Average) insures Stock in Warehouse for £5000.  
 Office B (*pro rata* Condition of Average) insures same for £1000.  
 Value at risk=£4000. Loss=£1200 .. 20
7. Office A insures “A row of three cottages for £1000.”  
 Office B insures the same “three cottages for £600, an equal portion on each.”  
 Losses—No. 1 Cottage, £400; No. 2 Cottage, £300; No. 3 Cottage, £50.  
 Apportion this loss. Both policies are without average. The value of each cottage is £600.  
 Comment upon the equity of the result of the apportionment .. 25

Marks.

8. A Manufacturer has the following Insurances on goods—
- |  |         |
|--|---------|
| In his factory, Office A (non-average) ..  | £6,000  |
| In his warehouse No. 1, Office B ( <i>pro rata</i><br>Condition of Average) .. .. .    | £5,000  |
| In his factory and warehouses Nos. 1 and 2,<br>Office C (two Conditions of Average) .. | £10,000 |
| <i>Values</i> —Factory .. .. .   | £5,000  |
| No. 1 warehouse .. .. .  | £8,000  |
| No. 2 warehouse .. .. .  | £7,000  |
| <i>Loss</i> —In No. 1 warehouse .. .. .  | £6,000  |
| Apportion .. .. .  | 20      |
9. The building of a Mansion House is insured by Office A for £10,000 and by Office B for £8000. *Loss* £5000. The Household Furniture is insured in Office C for £6000. *Loss* £3000. Extinguishing Expenses payable by Offices, £150. Assessor's Charges, £100. Draw out apportionment showing amount payable by each Office .. .. . 15
10. A Distiller has goods, as follows—

		<i>Insurances.</i>	
No. 1 Bond ...	£4,000	A on Goods in Bond No.	
„ 2 „ ...	5,000	1 ( <i>pro rata</i> Condition	
„ 3 „ ...	6,000	of Average) ...	£5,000
„ 4 „ ...	9,000	B on Goods in Bonds	
		Nos. 2 and 3 ( <i>pro rata</i>	
		Condition of Average)	7,000
		C on Goods in Bonds	
		Nos. 2, 3, and 4 (two	
		Conditions of Average)	3,000
		Don Goods in Bonds Nos.	
		1, 2, 3, and 4 (two Con-	
		ditions of Average) ...	6,000
			<u>£21,000</u>

<i>Losses</i> —No. 1 ...	£3,000
No. 2 ...	4,000
No. 3 ...	1,000
No. 4 ...	800

£8,800

Apportion .. .. . 30

## FIRE BRANCH.

Part III., Subject B.—LAW OF FIRE INSURANCE AND FIRE INSURANCE CONTRACTS.

*Two-and-a-half hours allowed for this paper.*

## QUESTIONS.

1. What do you know of either—
- |  |    |
|--|----|
| (a) The Lottie Sleigh case, or             |    |
| (b) <i>Castellain v. Preston</i> ? .. .. . | 20 |

Marks.

2. What is the position of a Second Mortgagee (in Scotland Second Bondholder) in regard to recovery under an Insurance on Rent? . . . . . 10
3. State fully the requirements in connection with a Fire Insurance Contract in respect of the disclosure of material facts, and what facts need not be communicated . . . . . 10
4. An Office gave notice that it would not continue the Insurance without the payment of an increased premium, and a Renewal Notice was issued stating that the premium should be paid within 15 days of grace. The Insured replied that he would not pay the increased premium. A fire occurred within the days of grace, when the Insured changed his mind and tendered the premium within the days of grace.  
State the position of the Insured and the Company in regard to the loss, and your reasons for your answer . . 10
5. What are the limits of an Insured's rights of recovery under a Fire Insurance Contract? . . . . . 10
6. State the circumstances in which—  
 (a) The Insured is entitled to a return of the premium paid or part thereof.  
 (b) The Insured is disentitled to such a return . . 20
7. What circumstances led to the celebrated King and Queen Granaries case? What was the decision of the Court of Appeal, and what bearing had this upon Fire Contracts made subsequent thereto? . . . . . 20
8. An Owner insured a property which he had let to a tenant, the lease containing a covenant by the tenant to repair.  
 The property was damaged by fire in circumstances which enabled the tenant to claim and receive compensation from the Corporation, and thereout he reinstated the house.  
 The owner claimed under his Policy against the Insurance Company, and while negotiations were going on between him and the Insurance Company he sold the reversion and assigned his Policy of Insurance to another party (hereinafter referred to as the "Purchaser").  
 The Insurance Company paid the Purchaser the amount claimed under the Policy (£750), being then unaware that by the terms of the tenant's lease the tenant was bound to make good injuries done by fire.  
 What are the legal rights of the Insurance Company?  
 State fully the grounds of such rights . . . . . 20



Marks.

9. Give a brief but comprehensive explanation of the doctrine of Subrogation, its extent and limitations, in connection with Fire Insurance contracts . . . . . 20
10. State fully the legal position under an ordinary Fire Insurance Policy in respect of loss or damage by explosion—
- (A) Where the Policy contains a Condition that it does not cover loss or damage by explosion—
- (a) Where the explosion was the result of an antecedent fire in progress on the premises.
- (b) Where the accident was caused by a leakage in the pipe of a still, whereby the inflammable gas escaped and mixed with the air, took fire at the lamps and exploded, blowing up the building, when the fire became general. The Policy expressly covered “loss or damage arising from explosion by gas,” and claim was made for “explosion” damage as being an “explosion by gas.”
- (B) Where there is no such Condition—
- (a) Where a fire has taken place upon the premises insured and gunpowder or some other explosive substance has ignited and increased the damage.
- (b) Where the explosion has taken place in an adjoining building and the limits of the injury by the fire and the explosion cannot be distinguished.
- (c) Where an occupier is engaged with an explosive spirit and an explosion has taken place, blowing down part of the building, and a fire ensues.
- (d) Where at a considerable distance from the premises insured an explosion of gunpowder has taken place, causing damage to the premises insured . . . . . 20
11. A Vendor contracted with a Purchaser for the sale of a house which was insured by the Vendor against fire. The Contract contained no reference to Insurance and no change had been made in the Policy. After the date of the Contract, but before the time fixed for completion, the house was damaged by fire. State in detail the legal position of all parties in relation to the Insurance money as it stands immediately after the fire . . . . . 20

Marks.

12. In what circumstances may two Companies insuring the same building have to pay in the aggregate more than the value of the building? Quote authorities.  
How can this be reconciled with the often-quoted maxim that a contract of Fire Insurance is one of indemnity only? .. .. . 20

### FIRE BRANCH.

#### Part III., Subject C.—FIRE EXTINGUISHMENT AND FIRE ALARM SYSTEMS.

*Three hours allowed for this paper.*

#### QUESTIONS.

##### AUTOMATIC SPRINKLER INSTALLATIONS.

1. An inspector examining a sprinkler installation desires to test the alarm, and for this purpose opens the  $\frac{1}{2}$ -in. testing cock. The alarm, however, fails to sound. State the possible causes to which the failure of the alarm to operate may be due .. .. . 20
2. Give a list of present-day accepted sprinklers which have—
  - (a) Flexible diaphragm valve seatings;
  - (b) Solid valve seatings;
  - (c) Two solder joints .. .. . 15
3. What is the minimum diameter of suction pipe required for a turbine pump, which is situate below the level of its water supply, and delivers 625 gallons of water per minute? (Any fraction of an inch to be taken as an inch) .. .. . 25
4. Describe briefly the operation of a hydraulic injector apparatus .. .. . 25
5. It is desired to instal sprinklers in a room 63 ft. wide by 67 ft. long, which has an open joisted ceiling. The room is divided into seven bays, the two end bays being 11 ft. wide, and the five intermediate ones 9 ft. wide. Make a rough plan showing the spacing of the sprinklers and the run of the feed pipes. The diameters of the pipes and the distances the sprinklers will be placed apart should be indicated .. .. . 20
6. An installation has for its water supplies a 6-in. connection from a town's main and a 6-in. connection from an 8-in. quadruple-acting automatic pump. The standing pressure of the town's main at the ground floor is 68 lbs. and the running pressure 60 lbs. The highest sprinkler is 87 ft. above the ground level. State the standard for which the installation would be eligible, and give reasons for your answer .. .. . 15

Marks.

7. It is required that in a pressure tank of 5000 gallons capacity, containing two-thirds water and one-third air, a minimum air pressure of 75 lbs. to the square inch shall be maintained when the base of the tank is on a level with the highest sprinkler.

State at what pressure the last drop of water would be expelled from the tank, and show how you arrive at your result .. .. . 20

#### AUTOMATIC FIRE ALARMS.

8. Describe briefly the operation of any approved automatic fire alarm system .. .. . 25

#### EXTERNAL DRENCHERS.

9. Two buildings (one four storeys and one two storeys in height) are to be protected by drenchers on one face against an opposing hazard.

To feed these drenchers the engineers propose to take a 6-in. connection out of the branch from the town's main which feeds the sprinkler installation, but from the town's main side of the back pressure valve.

State on which storeys the window openings would require to be protected, and whether the engineers' proposal to feed the drenchers would be satisfactory 20

#### ORDINARY FIRE EXTINGUISHING APPLIANCES.

10. Describe briefly the construction and operation of a chemical extingueur .. .. . 15

#### FIRE BRANCH.

Part III., Subject D.—FIRE INSURANCE PRINCIPLES AND PRACTICE IN THE UNITED KINGDOM.

*Two hours allowed for this paper.*

#### QUESTIONS.

1. Why is it necessary to insert as a Fire Policy Condition the right to enter, take, and keep possession of premises after a fire has happened therein? .. .. . 25
2. What do you understand by the expression "fire waste," and what are the physical conditions in structures and their use which govern this question? .. .. . 25
3. What is the theory of accumulation in fire risk, and what are the principal elements which constitute such accumulation? Is it the practice of Fire Offices to recognise this theory, and if so, in what manner? Do you consider the theory sound in principle, and if so, for what reasons? .. .. . 30

4. What are the most frequent causes from which unsatisfactory moral hazard may be apprehended? What course of action do you recommend in dealing with such cases? .. .. . 30
5. Define briefly the theory of Fire Insurance .. .. 25
6. Give some reasons for the insertion of the Arbitration Clause in Fire Policies .. .. . 20
7. What is meant by "unexpired risk"? How is the percentage usually reserved in Fire Accounts for this contingency arrived at? .. .. . 30
8. What is meant by the "cost price" of Fire Insurance, and how is the selling price arrived at? .. .. 15

### FIRE BRANCH.

Part III., Subject E.—CHEMISTRY.

*Three hours allowed for this paper.*

#### QUESTIONS.

1. What do you understand by chemical affinity?  
Would the information, volunteered during an inspection of (a) a raw material warehouse, (b) a finished products warehouse, that the substances stored in the former were relatively of great affinity and in the latter were elements of great affinity, be of use to you in estimating the chemical hazard? .. .. . 25
2. With what part of a chemical action does thermo-chemistry deal?  
Do you consider a knowledge of thermo-chemistry necessary or even desirable for the correct valuation of the chemical hazard in any process?  
What do the terms Endothermic Compound, Exothermic Change or Reaction, and Calories mean? .. .. 25
3. Give the following data—

	Density relative to Air.		Explosive Range.		Calculated rate of diffusion relative to Benzene.
Hydrogen ... ..	069	...	9.5/66.5	...	6.3
Carbon Monoxide ...	967	...	16/75	...	17.
Fire Damp (Methane)	55	...	6.2/12.7	...	2.2
Benzene ... ..	2.77	...	2.7/ 6.3	...	1

Use your knowledge of the diffusion of gases to ascertain which gas would be the first to render explosive the atmosphere of a room 20 ft. by 10 ft. by 10 ft., assuming—

(a) the room to have no ventilation;

- (b) the room to be provided with top ventilation only;
- (c) the room to be provided with bottom ventilation only;
- (d) the room to be provided with top and bottom ventilation.

Can you think of any industrial risks where a solution of the above problem would be of use in determining if adequate precaution were taken to ensure removal of gases?     ..     ..     ..     ..     ..     ..     40

4. Distinguish between temperature and heat of combustion.

What is the ignition point of a substance? Has it any connection (necessarily) with the flash point in liquid fuels?

What justification exists for allowing the use of certain patent fuel slow combustion stoves in Garages?

Would you permit the use of a similar stove whereon all the inlet and exhaust openings are carefully guarded with fine wire gauze in a factory where carbon bisulphide is used as a solvent?     ..     ..     ..     30

5. What is an explosion (a) chemically, (b) physically, (c) chemico-physically?

What are the essentials for the occurrence of explosions with gases and vapours?

It is proposed to cover the "explosion" risk in a corn mill lighted by electric light, with gas as a stand-by; there is in addition an ozone bleaching plant the exhaust of which passes into the general dust-collecting service. Would this information affect your decision to accept such a risk? Give reasons for your answer.

What in your opinion would happen in the following circumstances?

(A) A spark occurring in a gas-holder filled with—

- (a) Coal Gas (at a gas works);
- (b) Acetylene Gas (in a private house plant);
- (c) "Non-explosive" Petrol Air Gas (in a private house plant).

(B) An accident occurring in a foundry and causing large volumes of molten metal to overrun the foundry floor.

(c) A light corrugated iron match-lined structure with wooden floors and of one storey used for storage of calcium carbide in sealed drums being on fire and being attacked by the fire brigade with water     ..     ..     ..     40



Marks.

6. What in your opinion is the most risky process in each of the following cases, and why? What precautions should be observed either to eliminate the hazard or reduce its effect to a minimum?

(a) Gas Works; (b) Match Factory; (c) Dynamite or Blasting Gelatine Manufacture; (d) Nitric Acid (fuming) . . . . . 40

## FIRE BRANCH.

Part III., Subject F.—ELECTRICITY.

*Three hours allowed for this paper.*

## QUESTIONS.

1. Define the terms Volt, Ampere, Ohm, Watt, Kilowatt, and Board of Trade Unit . . . . . 10
2. Describe shortly a resistance and a choking coil, and state the precautions advisable when used inside premises containing combustible material . . . . . 10
3. Give the total electric horse-power required to drive a dynamo lighting 246 100-volt lamps of 16 c.p. each taking 4 watts per c.p., and six arc lamps each taking 5 amperes at 100 volts . . . . . 15
4. Give a concise description of an installation of steel tubing erected for protecting electric wires, conforming in all respects to the Board of Trade, Home Office, and I.E.E. rules . . . . . 15
5. Give a short description of a secondary accumulator. State the use of regulating cells forming part of a battery supplying an electric lighting installation. Give the reason why it is desirable to completely shut off the battery room from the engine room . . . . . 25
6. Give a reason why it is not considered advisable to insert a fuse in the neutral main of a three-wire system . . . . . 15
7. Give a concise description of the method of making an instrumental test of an electrical installation, the wiring being erected on the distribution board system. Describe the type of testing set most commonly used, and give a list of the tests required to be made by a Supply Authority before connection to their mains is permitted . . . . . 25
8. Define the terms Parallel and Series Lighting, and give diagrams . . . . . 15

Marks.

9. State the reason why it is advantageous for a Supply Authority to increase the pressure of supply from one hundred to two hundred volts.  
Give the principal alterations necessary to a consumer's installation before the increased pressure is connected to it . . . . . 15
10. Give a short description of continuous (or direct) and alternating currents, and state the reason why, when alternating current is used for lighting, the lamps appear to be perfectly steady . . . . . 15
11. Give concise descriptions of an open type arc lamp, a flame arc lamp, and a double enclosed arc lamp . . 25
12. Describe shortly the theory and function of an alternating current fixed transformer, and state the precautions usually adopted to guard against risk of fire and shock to life . . . . . 15

### FIRE BRANCH.

Part III., Subject G.—INSURANCE AGAINST LOSS OF PROFITS.

*Three hours allowed for this paper.*

#### QUESTIONS.

1. Give any reasons why the term "Insurance against Consequential Loss" should not be applied to this class of business . . . . . 15
2. What is the fundamental difference between the contract of Fire Insurance and the contract of Loss of Profits Insurance? . . . . . 10
3. Give a definition of :—
  - (a) Net Profit, as usually insured under a Loss of Profits policy;
  - (b) Standing Charges—what they strictly comprise, and what a policy may be extended to include;
  - (c) Increase in cost of working . . . . . 20
4. Is it customary to insure Increase in Cost of Working under a separate item, and if so, upon what basis? . . 15
5. Define the term "Period of Indemnity." Why is it necessary under an ordinary policy to insure annual figures, and not in proportion to the period of indemnity? . . . . . 15

Marks.

6. In the case of a loss under a policy insuring Standing Charges only, how is the loss estimated, and to what condition should the payment be subject? .. .. 15
7. What provision is there in a Loss of Profits policy against over-insurance? Is the policy subject to Average generally? .. .. 20
8. State briefly the advantage of the system of measuring losses by means of reduction in turnover or output as compared with—
  - (a) The method formerly in vogue, viz., the payment of a percentage of the fire loss; and
  - (b) The American system known as "Use and Occupancy" insurance .. .. 20
9. Should the percentage payable be the percentage of the sum insured to the turnover during the last financial year, or to the turnover during the 12 months immediately preceding the fire?
 

Give the reasons for your answer .. .. 15
10. State briefly what specific and general conditions are essential to Loss of Profits policies .. .. 15
11. At the beginning of a financial year a firm insures its Net Profit and Standing Charges of the previous financial year, say, £5000, the term of indemnity being six months, the policy providing for the payment of the percentage of the sum insured to the turnover of the previous financial year. The turnover immediately begins to increase, and within a month it reaches the rate of 100 per cent. more than that of the corresponding period of the previous year, and thereafter continues at that increased rate. A fire occurs in the last month of the term of insurance. (a) What is the result, supposing the loss to be total? (b) Is the Office justified in paying on such result? (c) If not, why, and what is the remedy for such a case? .. 20
12. A firm having four factories and a central warehouse wish to insure in one policy the Net Profit and Standing Charges of the whole business, the loss to be proved through shortage in turnover at the warehouse. The firm's trade is largely a seasonal one, and the warehouse is sometimes fully stocked, at other times only partially so.
 

How would the firm be affected by (a) a fire at the warehouse under each of the two conditions last named, and by (b) a fire at one of the factories? What special provision in the policy would be required to give the Insured a full indemnity in all the circumstances mentioned? .. .. 20

## FIRE BRANCH.

Part III., Subject H.—POLICY CONDITIONS (FOREIGN AND COLONIAL).

*Two hours allowed for this paper.*

## QUESTIONS.

- |  | <i>Marks</i> |
|--|--------------|
| 1. In which Foreign Countries is the application of the Average Clause optional so far as regards Specific Risks? .. .. .  | 20           |
| 2. What contingencies do the General Foreign conditions not cover under any circumstances? .. .. .   | 20           |
| 3. What are the rights of a Company, under the General Foreign conditions, as regards Salvage? .. .. .   | 20           |
| 4. What are the conditions under which a Company may, under the General Foreign conditions, reinstate property destroyed by fire, and what are the obligations of the Insured under such circumstances? .. .. .                | 20           |
| 5. Under what different circumstances may Arbitration be resorted to under the General Foreign conditions, and what differences exist between the Arbitration clause in these conditions and that in use in Australia? .. .. . | 25           |
| 6. In the event of a fire, what are the different circumstances—under the General Foreign conditions—under which an Insured forfeits all right to benefit under his policy? .. .. .  | 20           |
| 7. Under what circumstances can a Company, under the German conditions, cancel a policy during its currency? .. .. .   | 25           |
| 8. What is the position, under the Swedish conditions, when an Umpire's award differs from that of the Arbitrators? .. .. .  | 25           |
| 9. What is the position of an Insured, under the Ontario Statutory Conditions, in the event of loss, if there are other Insurances of which he has failed to give notice to the Company? .. .. .                               | 25           |

## FIRE BRANCH—FOREIGN.

Part III., Subject J.—FRENCH LANGUAGE.

*Two hours allowed for this paper.*

## QUESTIONS.

- Write out in full, with the appropriate pronouns, the imperfect indicative and present subjunctive of—  
accuser; bénir; acheter; résilier; pouvoir; giving  
in each case the English equivalent .. .. . 20

Marks.

2. Give the 3rd person plural of the past definite (prétérit) of—  
 assurer; vérifier; vêtir; recevoir; entendre; courir;  
 acquérir .. .. . 20
3. Give the feminine of the following adjectives—  
 complet; secret; beau; vieux; fou; jaloux; faux;  
 sec; frais; trompeur; public; enchanteur .. 10
4. Give the comparatives of: bon; petit; mauvais .. 10
5. Translate into French :—  
 A French dictionary.  
 A round opening.  
 A fine warehouse.  
 An important town.  
 The magnificent courage of the firemen.  
 These chairs cost dear.  
 He wore a white coat and hat.  
 It is the highest chimney in the town.  
 The walls and the doors are old.  
 An intelligent and careful clerk .. .. . 25
6. Translate into English :—  
 Je le ferai à tête reposée.  
 L'indemnité sera versée au fur et à mesure de  
 l'exécution des travaux.  
 Vous ne vous y prenez pas bien.  
 Je me suis mis en quatre pour vous rendre service.  
 Les marchandises seront évaluées à l'acquittée.  
 Il se fait trop valoir.  
 Envoyez-moi un mot d'avis afin que je sache à quoi  
 m'en tenir.  
 Il n'en viendra jamais à bout.  
 L'assuré supportera sa part des dommages au marc le  
 franc.  
 Je ne sais trop quel parti prendre .. .. . 25
7. Translate into French :—  
 In reply to the enquiry contained in your letter of the  
 29th ultimo, we have pleasure in advising you that  
 we are willing to accept the insurance of the manu-  
 factory referred to on condition that the rate for the  
 machinery in the wood-working portion be increased  
 to 25s. per cent. Our acceptance is further subject  
 to the condition that a satisfactory installation of  
 fire extinguishing appliances be provided .. .. 40
8. Translate into English :—  
 (A) Le risque de guerre dans les Balkans a eu son influ-  
 ence sur le marché de l'assurance. Comme on ne  
 peut prévoir les conséquences qu'aurait pour les



navires se rendant en Turquie et dans tout le sud de l'Europe une guerre dans les Balkans, les assureurs de Hambourg ont décidé de dénoncer l'assurance du risque de guerre pour les contrats en cours qui devaient avoir encore une durée de quinze jours. Cette dénonciation ne vise naturellement que les navires qui n'ont pas encore abandonné leur port de sortie. Pour les navires en cours de route, l'assurance subsiste jusqu'à l'arrivée au port de destination.

- (B) Il est convenu que les sommes assurées sous les dénominations "Matériel et mobilier industriel" comprennent tous les objets généralement quelconques, fixes ou mobiles, sans aucune exception ni réserve, servant à l'exploitation d'une fabrique d'automobiles et à son entretien, se composant principalement de générateurs et leurs massifs, machines à vapeur, transmissions, tuyauterie et accessoires, appareils d'éclairage et de chauffage, téléphones, câbles, fils, poteaux et autres agencements nécessaires au roulement de l'établissement, tant à l'intérieur qu'à l'extérieur des bâtiments y compris les souterrains en dépendant.
- (c) Si une vacance survient au cours d'un exercice, le Conseil d'Administration a la faculté de pourvoir provisoirement au remplacement du membre décédé ou démissionnaire, sous réserve de l'agrément de la prochaine assemblée générale, qui procédera au remplacement définitif. Les pouvoirs du membre ainsi élu auront la même durée que ceux du membre remplacé . . . . . 50

### FIRE BRANCH.

Part III., Subject J.—SPANISH LANGUAGE.

*Two hours allowed for this paper.*

#### QUESTIONS.

- Write out in full the future indicative and present subjunctive of—  
bailar, venir, sentir, ser, valer . . . . . 20
- Give the 1st person singular and 3rd person plural of the past definite of—  
estar, caber, dormir, haber . . . . . 20
- What is the difference between the verbs "ser" and "estar." Give an example . . . . . 5
- Give the feminine of the following adjectives:—  
oportuno, universal . . . . . 5

Marks.

5. Give the plural of audaz, gentil, rey, carácter . . . . . 5  
 6. Give the comparative of bueno, fino, malo . . . . . 5

7. Translate into Spanish :—

What o'clock is it ?  
 The Average Clause must be inserted.  
 What is the name of the owner ?  
 The construction of the walls.  
 The roof is of French tiles.  
 A Fire Insurance Company must put up a deposit.  
 The object of a contract is to bind the parties.  
 A man must study if he wants to learn.  
 A steam engine.  
 Double iron doors . . . . . 25

8. Translate into English :—

Mas vale callar á veces.  
 Las cimas de las montañas están cubiertas de nieve.  
 El incendio fué observado por mucha gente.  
 No daría ni siquiera una peseta por ese libro.  
 Bueno fuera que viniesen ahora mismo pues si tardan  
 no tendré tiempo suficiente.  
 Ojalá que le viera, pues hace rato que no sé nada de  
 él.  
 La oportunidad de aprender mejor, vendrá con la  
 práctica.  
 La redacción de las pólizas debe ser idéntica; pues, de  
 no serlo, podrían sobrevenir dificultades si ocurriere  
 un siniestro.  
 Temo que le engañen, pero si quiere V<sup>d.</sup> que lo  
 averigüe lo someteré á uno que es perito en la  
 materia.  
 En la primera habitación en que entramos no habia  
 ningun trasto, seguia otra amueblada con un cajon  
 vacío que parecia servir de silla y de mesa. En fin  
 el mobiliario personal valia poco mas que nada . . . 25

9. Translate into Spanish :—

We have your letter of the 28th instant, and have  
 pleasure in authorising you to accept a share of  
 68% of the total insurance on the Worsted Mill you  
 so strongly recommend. This will give us an  
 interest of Pts. 469,580.

We would, however, remind you that since this Mill  
 was last inspected, considerable extensions have  
 been made to the building, and we should wish you  
 to take an early opportunity of having the plan  
 brought up to date.

Please note that it is only because this is a Worsted  
 Mill and not a Woollen Mill that we have accepted a  
 larger amount . . . . . 40

10. Translate into English :—

- (A) “El asegurado declara, y sólo por esta declaración  
“se extiende este seguro, que no vende y no tiene  
“en sus almacenes ni aceites, ni esencias minerales  
“ni carburo de calcio, y se compromete en el caso de  
“que los tuviera á hacerlos declarar en la póliza y á  
“pagar el aumento de prima correspondiente.”

Un inmueble en donde exista cualquier establecimiento con despacho de aceites, de esencias minerales o de carburo de calcio, puede asegurarse sin aumento de prima cuando el conjunto de estos establecimientos no ocupe más que la cuarta parte del edificio; es decir, que el inmueble y los objetos colocados en el resto de la casa, solo pagarán la prima ordinaria.

- (B) “El asegurado declara que el terreno en el cual  
“existe el edificio asegurado por el artículo cinco de  
“la póliza pertenece á Don Emilio Sanz. En su  
“consecuencia, queda expresamente convenido  
“que en caso de incendio total o parcial, la  
“indemnización de la Compañía se empleará  
“directamente a la reparación o reconstrucción del  
“inmueble en el mismo terreno donde se encon-  
“traba, pagando los trabajos á medida de su  
“ejecución. Si el asegurado no reparare o recon-  
“struyere el edificio sobre el mismo terreno en el  
“término de un año, contado desde la fecha del  
“sinistro, la indemnización se reducirá al valor  
“que tuvieren los materiales destruidos, en caso de  
“demolición.”

- (C) Las entidades extranjeras establecidas ó que se establezcan en España por medio de representación ó sucursal, estarán obligadas á llevar, en idioma castellano, una contabilidad especial para las operaciones que celebren en España ó hayan de cumplir en ella. Los contratos que estas sucursales hagan estarán también redactados en castellano, y sus estatutos y documentos se presentarán en el propio idioma, y ese texto será el único que tenga valor legal .. .. . 50

### FIRE BRANCH—FOREIGN.

Part III., Subject K.—FOREIGN CORRESPONDENCE.

*Two hours allowed for this paper.*

#### QUESTIONS.

1. A Merchant in a certain town, where the Company is not represented, enquires whether the Company would appoint him as Agent there. The enquiry apparently

*Marks.*

- warranting favourable consideration, write indicating the points on which information should be furnished to enable the Company to deal with the question .. 20
2. An insured person A B has written to the Company to the effect that he had himself endorsed a policy issued to him, stating the interest therein to be transferred to Messrs. C D. Write to him commenting on his action .. .. . 15
  3. An Agent has issued a policy on goods, dating from the 10th October to the 30th June, at the aliquot part of the annual premium, the Insured desiring the Insurance to expire at the latter date and having promised to renew it. No tariff is in question. Write to the Agent on the subject .. .. . 15
  4. Write to an enquirer explaining in what respect the practice of Continental Companies differs from that of British Companies in the matter of renewals .. 15
  5. A person occupying a flat in Paris enquires what Insurance he should take out in addition to that on his private effects, in order that he may be protected against claims from any third parties. Write explaining this .. .. . 20
  6. A firm, being about to erect a range of warehouses for the storage of general goods, has requested the Company to advise them regarding construction and general arrangements with the object of attaining the greatest security against fire. Write indicating the principal points which should be observed .. 20
  7. A proposal is received on a Furniture Factory worked by steam power. Write making enquiries on the most important points with a view to the consideration of the proposal and the quotation of rates .. 25
  8. A client reports that a fire has damaged his dwelling-house and furniture therein. The policy is subject to average. Write explaining what steps he should take, and the nature of the evidence which the Company would expect to receive in support of his claim 20
  9. An Agent reports a claim on a risk which was burnt during a riot, and states that there is ground for supposing that the fire was caused by rioters. The policy is subject to the usual conditions. Write in reply .. 25
  10. Describe the principal characteristics from the point of view of Fire Insurance of Alexandria and Rangoon, detailing their commerce and industries .. 25

## LIFE BRANCH.

Part II., Subject A.—ELEMENTARY HUMAN PHYSIOLOGY.

*Two hours allowed for this paper.*

## QUESTIONS.

- |  | <i>Marks.</i> |
|--|---------------|
| 1. Describe briefly the bones entering into the framework of the thorax . . . . .  | 25            |
| 2. What do you understand by a reflex action? Illustrate your answer by the act of respiration . . . . .   | 25            |
| 3. What do you know about the sounds of the heart? Explain how it is that you can feel the heart beating by placing the hand on the chest. At what spot is this most apparent? . . . . . | 25            |
| 4. Describe the position and functions of the liver . . . . .  | 25            |
| 5. Describe a transverse section of the spinal cord. Explain what is meant when spinal nerves are said to be mixed nerves . . . . .  | 25            |
| 6. Describe the position and function of the kidneys . . . . .   | 25            |
| 7. What do you know about the red corpuscle? . . . . .   | 25            |
| 8. How do the products of digestion reach the tissues of the body? . . . . .   | 25            |

## LIFE BRANCH.

Part II., Subject B.—THE USE OF COMPOUND INTEREST AND LOGARITHMIC TABLES.

*Two-and-a-half hours allowed for this paper.*

## QUESTIONS.

1. (a) What is a Logarithm? Write down the Logarithm to base 10 of 1 and .0001 . . . . . 10
- (b) Explain clearly why in a table of Common Logarithms it is only necessary to tabulate the mantissa, and indicate the essential condition to render the principle involved applicable to Logarithms to any other base (*e.g.*, base 8) . . . . . 10
- (c) Prove from first principles that  $\text{Log}_{10} 2 = \text{Log}_e 2 \times \text{Log}_{10} e$  . . . . . 10



2. The following is an extract from a table of Common Logarithms:—

No.	0	1	2	3	4	5	6	7	8	9	
4920	6919651	9739	9828	9916	0004	0092	0181	0269	0357	0445	1 88
											2 9
											3 18
											4 26
											5 35
											6 44
											7 53
											8 62
											9 70
											9 79

Marks.

- (a) Write down the Logarithms of 4920969  
 $\cdot 004920624$   
 $[\cdot 000492]^3 \times \sqrt[2]{\cdot 049201} \quad \dots 15$
- (b) Find the numbers whose Logarithms are—  
 $\cdot 6919698$   
 $2\cdot 6919884 \quad \dots 10$

3. Given  $\text{Log } 4 = \cdot 6020600$   
 $\text{Log } 104\cdot 079 = 2\cdot 0173628$   
 $\text{Log } 25\cdot 01923 = 1\cdot 3982739$

Find the effective rate of interest corresponding to a nominal rate of 4 per cent. per annum convertible weekly  $\dots \dots \dots 20$

4. Given  $\text{Log}_{10} 5 = \cdot 69897$   
 $\text{Log}_{10} 3 = \cdot 47712$   
 $\text{Log}_{10} 281 = 2\cdot 44870$

Calculate the number of years it will take by the operation of compound interest at the rate of  $5\frac{3}{8}$  per cent. per annum (yearly rests) for £1 to amount to £100  $\dots 20$

5. (a) How would you obtain from interest tables the present value (at the effective rate of interest of 5 per cent. per annum) of £100 payable by instalments of £10 every two years, the first payment of £10 to be made two years hence?  $\dots \dots 20$

(b) Given the value at 5 per cent. of  $V^{10} = \cdot 61391$ , calculate the approximate numerical value  $\dots 15$

6. Given the value of an annuity of £1 per annum for 20 years at 5 per cent. and the present value of £1 due 20 years hence at the same rate, how would you calculate the value of an annuity for 20 years, the first payment of such annuity being £25, and each successive payment £5 more than the one immediately preceding?  $\dots \dots 20$

Marks.

7. (a) How would you ascertain from interest tables the equalised half-yearly payment for 3 years necessary to discharge a loan of £1000, contracted at the nominal rate of interest of 5 per cent. per annum, payable half-yearly? .. .. 10
- (b) If the half-yearly payment, including interest, is £181 10s. 10d., exhibit in schedule form the actual interest in each payment, the capital repaid by each instalment, and the capital outstanding immediately after each payment has been made 20
8. How would you construct and check a table of the values of  $a_n^{-1}$  .. .. 20

## LIFE BRANCH.

Part II., Subject C.—THE MEANINGS OF COMMON MEDICAL TERMS  
AND THE EFFECT OF WELL-KNOWN DISEASES ON LONGEVITY.

*One-and-a-half hours allowed for this paper.*

## QUESTIONS.

1. (a) What is meant by “functional albuminuria” as distinguished from “albuminuria”?  
(b) Indicate generally the bearing of each of the above on eligibility for Life Assurance.  
(c) Describe shortly the features of the two forms of diabetes which occur most frequently .. 34
2. What is the thyroid gland? Mention the name of any disease thereof, stating its general characteristics and importance in connection with Life Assurance .. 32
3. What is the difference between—  
(a) otitis and ostitis?  
(b) pleurisy and pneumonia?  
(c) hæmoptysis and hæmatemesis? .. .. 33
4. Mention the names of, and describe, any three diseases, any one of which if known to have existed in a proposer should generally disqualify for Assurance .. 33
5. State what requirements should be satisfied and conditions made in accepting a proposer aged between 20 and 30 whose father and one brother have died from Phthisis, the mother and two other brothers being alive and healthy .. .. 36
6. To what forms of disease are asthmatical persons generally liable, and from what common form of disease are they sometimes considered to be immune? 32

# LIFE BRANCH.

Part II., Subject D.—CLIMATIC GEOGRAPHY.

*One-and-a-half hours allowed for this paper.*

## QUESTIONS.

*Marks.*

1. The climate of a country is described as Insular or Continental. What do you understand by these terms? 10
2. Describe how the position of a place on the Earth's surface is determined, defining clearly any technical term made use of in your reply . . . . . 25
3. To what causes do you attribute variations in climate? 30
4. Define the terms "Equator" and "Tropics," and state whether all places near the Equator would be considered equally unhealthy, giving examples . . . . . 25
5. What are Isothermal lines? It has been stated that "Isothermal lines would coincide with the parallels of latitude but for the several causes which affect the climate of a place." What do you understand by this statement? . . . . . 30
6. State the geographical position of any six of the following places:—
 

Shanghai.	Colombia.	Teheran.	Tokio.
Quito.	Colombo.	Acapulco.	Lima.
Quetta.	British Columbia.	Karachi.	.. 30

# LIFE BRANCH.

Part II., Subject E.—PROPOSALS, CLAIMS, LOANS ON POLICIES, AND SURRENDERS.

*Two hours allowed for this paper.*

## QUESTIONS.

1. (a) A proposal has been accepted at an increased premium, on account of unfavourable features in the reports of the Medical Examiner and of the Medical Attendant. The proposer refuses to complete except at the normal premium, and enquires the reason for the addition. The Office's system of distribution of profits is based upon the premiums received. Draft a suitable reply incorporating the suggestion that a contingent debt might possibly meet the objection.

Marks.

- (b) In the above case the contingent debt system is found unsuitable, as the policy is required for family provision : the proposer is inclined to modify his decision, but suggests a re-examination after a few years, with a view to the reduction of the premium to the normal rate. How would you treat the request? . . . . . 40
2. The age of the life upon which a policy has been issued is found to have been understated. Discuss the mode of dealing with the point (a) if the mistake is discovered during the currency of the policy ; (b) if the error in age is only found upon production of evidence when the policy has become payable. Would the nature of the policy make any difference? . . . . . 40
3. A proposal has been made for the issue of a policy to provide for the payment of Death Duties. State a clause to be included in or endorsed upon the policy, and the procedure to be followed on the claim by death arising . . . . . 30
4. An application is received from an Assured for a loan upon his policy, which has been previously mortgaged to a third party. The latter is prepared to acquiesce in the arrangement. What procedure should be adopted? State shortly the principal clauses and conditions which should be incorporated in the agreement or bond . . . . . 30
5. Discuss the methods of dealing with a proposal (a) where the life has not been vaccinated, and (b) where the life is connected with the liquor trade . . . . . 20
6. (a) How would you expedite the surrender of a policy effected through a foreign agency which has no funds in hand to meet the payment, while the policy has been the subject of dealings abroad of which only formal notices, transmitted by the Agent, have been received at the Head Office? . . . . . 40

or

- (b) Why is the Reassurance of a portion of an assurance of large amount with other Offices desirable? Explain the steps taken to effect a reassurance . . . . . 40

*N.B.—Candidates must not attempt both 6 (a) and 6 (b).*

LIFE BRANCH.

Part II., Subject F.—FORMS OF POLICIES AND GENERAL CONDITIONS.

*One-and-a-half hours allowed for this paper.*

QUESTIONS.

*Marks.*

1. A non-profit policy for £500 payable on the death of A is effected by B and C. Draft two "Destination" clauses—
  - (a) Providing for payment of the sum assured to B and C as joint tenants, and . . . . . 10
  - (b) to B and C as tenants in common in moities 15
2. Draft a "Non-Forfeiture" clause providing for the surrender value of a policy at the date of non-payment of a premium to be applied to keep the assurance in force until exhausted . . . . . 80
3. Draft an endorsement providing for one half of the first five annual premiums to remain as a debt on the policy bearing interest at 5 per cent. per annum, payable in advance, the debt to be liquidated by the cash value of the bonuses, as declared. Annual premium £100 . . . . . 80
4. Draft a clause prohibiting aviation without the previous consent of the Office . . . . . 15

LIFE BRANCH.

Part III., Subject A.—LAW AFFECTING LIFE POLICIES, LOANS THEREON, SURRENDERS THEREOF, AND CLAIMS THEREUNDER (ELEMENTARY PRINCIPLES).

ENGLISH SECTION.

*Two hours allowed for this paper.*

QUESTIONS.

1. A, resident in England, and B, resident in Ireland, both intimate to your Office that they desire to surrender their Life Policies. Is there any reason why the discharge of each for the surrender value may not be equally valid? . . . . . 30
2. What disabilities are incident to a Voluntary Assignment? Discuss the question as to whether an Office may accept a surrender of a Policy from a Voluntary Assignee . . . . . 30
3. Write a short note upon the legal Presumption of Death 20



Marks.

4. A, having effected a Policy on the life of B, predeceased the latter, and Letters of Administration with the will annexed were granted to C. C also predeceased B and Probate of his will was granted to his Executor D. D having survived B claimed payment of the policy moneys on the death of B. Can payment be safely made to him, and if not, to whom should payment be made? .. .. . 30
5. What are the Stamp Duties required upon :—  
 (1) A Policy of Life Assurance (Whole Life)?  
 (2) An Annuity Bond?  
 (3) An Absolute Assignment for value?  
 (4) A Voluntary Assignment?  
 (5) A Mortgage?  
 (6) A Settlement? .. .. . 20
6. A, who had mortgaged his £1000 Policy to a Bank, has just died. The mortgage was to secure advances without limit, and the *ad valorem* duty upon it covers £1000. The Bank claims payment of the whole moneys assured. In your opinion what course should the Office pursue assuming :—  
 (i) That the Policy is without profits?  
 (ii) That the Policy is with profits and that Bonuses of £250 attach? .. .. . 30
7. What important doctrines are laid down in :—  
 The Gambling Act?  
 The Policies of Assurance Act, 1867? .. .. . 20

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### LIFE BRANCH.

#### Part III., Subject B.—CORRESPONDENCE.

*Two hours allowed for this paper.*

#### QUESTIONS.

1. What methods can be adopted to convey an urgent letter to its destination more rapidly than by the postal service? Explain each method fully .. .. . 20
2. Draft a letter of general instructions to a medical examiner when you wish his report on a male life on a blank sheet of paper. Add special notes when the proposer (a) has had rheumatic fever; (b) is a butcher 30
3. Write a letter contrasting the Endowment Assurance and Limited Premium forms of policy, with reasons in support of either .. .. . 30

Marks.

4. Reply to a correspondent who writes asking for the best way of effecting a policy for the benefit—
    - (a) of his wife only ;
    - (b) of his wife and children.

NOTE.—Scottish candidates will answer this question in accordance with procedure in Scotland .. .. 25
  5. Draft a short leaflet descriptive of a scheme of minimum premiums .. .. 35
  6. The son of a Policy-holder writes announcing the death of his father, and asks for instructions as to how the policy moneys can be obtained. The Assurance was originally taken out in the deceased's own name and favour.
- Write a reply explaining the steps that have to be taken before the Office can pay the money :—
- (a) Where no will has been left ;
  - (b) Where the Policy-holder has left a will, but the Office have received notice of an assignment of the policy and a letter that the claim under the assignment has been satisfied .. 30
7. Draft the list of questions for a form of report by an Agent on a proposer .. .. 30

### LIFE BRANCH.

Part III., Subject C.—PRINCIPAL TABLES OF MORTALITY.

*One-and-a-half hours allowed for this paper.*

#### QUESTIONS.

1. Define a Mortality Table. What does it usually contain and what are the principal uses to which it can be put ? 40
2. According to the H<sup>m</sup> Table of Mortality the numbers living at the following ages and the numbers dying between those ages are as given below :—

Age.	Living.	Dying.
20 ..	96,223 ..	609
21 ..	95,614 ..	643
22 ..	94,971 ..	650
23 ..	94,321 ..	638
24 ..	93,683 ..	622
25 ..	93,061 ..	617

On the basis of these figures give the numerical values of the following probabilities :—

- (1) That a life age 20 will live 5 years.
- (2) That a life age 20 will live to age 23 and die before attaining age 24.
- (3) That a life age 22 will die within 3 years .. 30

- Marks.*
3. What do you understand by "Aggregate" and "Select" Tables of Mortality? What is the chief difference in the modes of their construction, and to what particular uses can they be put in practice? .. .. 50
  4. Compare the relative rates of mortality displayed by Mortality Tables based on the latest data derived from the experience of (1) the General Population; (2) Medically Selected Lives; (3) Annuitants; and mention their principal uses .. .. 40
  5. State what you know with regard to the origin and characteristics of the British Offices Healthy Males Mortality Experience known as the O<sup>m</sup> Mortality Table 40

### LIFE BRANCH.

Part III., Subject D.—LIFE OFFICE VALUATIONS (GENERAL PRINCIPLES).

*Two hours allowed for this paper.*

#### QUESTIONS.

1. What is the advantage claimed by making a valuation by the OM and OM<sup>5</sup> Tables over that in which one Table of Mortality alone is used? .. .. 20
2. What are negative Policy Values? How do they arise? 15
3. State the relative Reserves required by a valuation by the following Tables:—HM 3%, OM 3%, OM<sup>5</sup> 3%, HM and HM<sup>5</sup> 3%, OM and OM<sup>5</sup> 3% .. .. 15
4. What are the chief Tables used in valuing Annuity Contracts? .. .. 15
5. Give three methods of calculating Surrender Values. Discuss fully the principles involved in the case of any one of them .. .. 25
6. Having the Board of Trade Returns, what tests would you apply to ascertain whether an Office was a good one? 20
7. State what particulars are required to be furnished under Schedule IV. A. to the Board of Trade at the quinquennial valuations in respect of the results of the valuation .. .. 15
8. The following is an extract from a Prospectus, and refers to a Natural Premium scheme of Life Assurance:—  

"As the payments to the Life Fund are based upon  
 "the HM Table of the Institute of Actuaries, with  
 "one-third added, the chances of Policy-holders being  
 "called upon to pay a higher rate than at the age at  
 "entrance are very remote. The Interest upon the  
 "Life Assurance Fund should be more than sufficient  
 "to cover any possible increased cost."

 Criticise this statement .. .. 25

## LIFE BRANCH.

## Part III., Subject E.—SOURCES OF PROFIT AND METHODS OF DISTRIBUTION.

*Two hours allowed for this paper.*

## QUESTIONS.

Marks.

1. Discuss the effect on the future profits of an Office by the transaction of a new business increasing rapidly from year to year . . . . . 40
2. What are the chief sources of profit of a Life Office? How would these sources be effected by alteration in the valuation interest basis from 3 per cent. to  $2\frac{1}{2}$  per cent. in a net premium valuation? . . . . . 40
3. Discuss the question of profits arising from—
  - (a) Whole of Life with-profit Policies.
  - (b) Endowment Assurance with-profit Policies.
  - (c) Whole of Life non-profit Policies.
  - (d) Annuity Business . . . . . 30
4. What options are usually given to a policy-holder on the declaration of a reversionary bonus? . . . . . 25
5. Can you suggest any method of ascertaining if an Office's method of distribution of profits is equitable as between different ages at entry and on different Tables of Assurance? . . . . . 40
6. Explain what you understand by—
  - (a) The Compound Bonus System.
  - (b) The Contribution method of distributing surplus 25

## LIFE BRANCH.

## Part III., Subject F.—LIFE OFFICE ACCOUNTS AND INVESTMENTS.

*Two hours allowed for this paper.*

## QUESTIONS.

Marks.

1. What are the purposes to be kept in view in the arrangement of the book-keeping system of a Life Assurance Office? . . . . . 28
2. How would you treat the following items in the Accounts of a Life Office?
  - (a) Premiums reduced by application of Bonus ;
  - (b) Unpaid instalments of half-yearly premiums ;
  - (c) Income Tax on outstanding and accrued interest 28

Marks.

3. Give the form of Revenue Account prescribed by the Assurance Companies Act, 1909.  
Can you suggest any improvements which might suitably be made, either in amendment, or with a view to obtaining more information from the Companies? .. .. . 30
4. Define the following terms—  
(a) Par of Exchange;  
(b) Parity;  
(c) Unfunded Debt;  
(d) Gold Bond .. .. . 28
5. What are the principal causes of the decline in Consols during the last sixteen years? .. .. . 28
6. Describe briefly the methods of transferring—  
(a) Inscribed Stock;  
(b) Registered Stock;  
(c) Bearer Bonds .. .. . 28
7. What are the most usual methods adopted by Life Assurance Companies in the valuation of their Stock Exchange Securities?  
Which do you prefer and what are your reasons for doing so? .. .. . 30

### ACCIDENT BRANCH.

Part II., Subject A.—ELEMENTARY HUMAN PHYSIOLOGY.

*Two hours allowed for this paper.*

#### QUESTIONS.

DIAGRAMS SHOULD BE GIVEN WHENEVER POSSIBLE.

1. What is the Duodenum? What relation has it to the Pancreas and Liver? .. .. . 20
2. How does air reach the lungs? Explain briefly the mechanism of respiration .. .. . 20
3. What are the differences, both of structure and function, of Arteries and Veins? Mention particularly the use of the valves of the latter .. .. . 40
4. What is meant by (a) a Vertebra; (b) a Ligament? Describe the chief uses of Cartilage .. .. . 20
5. What is the Arterial Pulse and how is it produced? .. 20
6. What would result from injury to (a) the anterior root of a spinal nerve; (b) the posterior root? .. .. . 20
7. What is the Lachrymal Gland? Describe its use .. 20
8. What is the difference between the Epidermis and Dermis? .. .. . 40



# ACCIDENT BRANCH.

Part II., Subject B.—LAW (ELEMENTARY).

*Two hours allowed for this paper.*

## QUESTIONS.

*Marks.*

1. A workman 65 years of age was injured 10 years since in the employment of his present master, losing as a result his left hand and the sight of his left eye. He is very trustworthy, and his employer retains him doing odd jobs. Led to imagine that difficulties will arise when proposing for insurance under the Workmen's Compensation Act, the master arranges with the man that the latter shall have no claim under the Act in the event of further injury, and a form of agreement is completed between them.  
 What might be the effect of such an arrangement?  
 Does it violate any section of the Act, and, if so, which?  
 What could the workman plead in the event of further injury, or his dependants in case of death? .. .. 30
  
2. "A," a workman, attains his majority in May; he is in the employ of "B" for two hours per day, for which he is paid 7s. per week. He supplements this by working for "C" for 3 hours per day, for which he receives 9s. per week, and he also works casually for "D" for 2 hours per week, for which he receives 1s. He is injured on the 12th May whilst working for "D," and is incapacitated for 4 weeks.  
 What enquiries would you deem necessary for dealing with the claim?  
 State the amount of compensation to which "A" is entitled?  
 Who pays it?  
 Give reasons.  
 Whilst not quoting the wording verbatim, give sufficient indication to enable the examiners to identify the Sections under which you would deal with the claim 30
  
3. A miner in the course of his employment, and standing on the ground whilst building a six-foot wall filled with rubble, has a fit of apoplexy, ending fatally, and it is contended in the interest of the widow that the case comes within the scope of the Workmen's Compensation Act.  
 State how you would deal with the matter and give reasons.  
 Is there a case upon the point? .. .. 25

Marks.

4. An apprentice, 15 years of age, is indentured for five years. He receives no pay the first 12 months, but is to be paid 2s., 4s., 10s. and 17s. 6d. per week respectively in each of the succeeding years. He lives at home.

He meets with a serious accident during the first year and within one week of the commencement of his apprenticeship.

State fully in your opinion his position under the Act and the rate of compensation . . . . . 20

5. "B" and "C" are the partners in a firm. "A," a workman and a son of "B," meets with an accident whilst in the firm's employ. "A" lives with his father.

What is "A's" position under the Workmen's Compensation Act?

Give reasons for your answer . . . . . 20

6. A pedestrian is injured by a collision between two vehicles; the owners of both vehicles are made defendants in an action for negligence, claim being made against them both jointly and in the alternative. Judgment is given against one defendant alone.

(a) What rights, if any, has the plaintiff with regard to costs incurred in suing successful defendants?

(b) Assuming in this case that both defendants had been found guilty of negligence, define the legal position in which this finding places the plaintiff.

(c) If, instead of a pedestrian, the claimant had been a passenger in one of the vehicles and was injured by the negligence of both drivers, his driver being also injured, discuss briefly the relative legal remedies of the passenger and his driver . . . . . 30

7. A workman in the employ of a firm of hot-water engineers who are engaged to instal an apparatus in a country residence meets with an injury by some planks placed over an excavation in a corridor slipping while he is passing over them. The trench in question has been made by a local builder on the instructions of the engineer's foreman, and is to be paid for separately by the owner of the house. If the injured workman sues the owner of the house, has he a valid claim? . . . . . 25

8. An accident is caused by an attempt of one 'bus driver to race another and obstruct his passage.

Is the 'bus company liable for damages? . . . . . 20

# ACCIDENT BRANCH.

## Part II., Subject C.—PERSONAL ACCIDENT, DISEASE AND SICKNESS RISKS.

*Two hours allowed for this paper.*

### QUESTIONS.

*Marks.*

1. What is the Arbitration Clause embodied in a Personal Accident Policy, and how does it operate? .. .. 20
2. What is the reduction usually allowed on a Personal Accident Policy to a total abstainer, and what is the usual limit of all bonuses? .. .. 10
3. In the event of a Personal Accident Policy-holder engaging in a more hazardous occupation than that stated on the Policy, and meeting with an accident, what is the usual procedure in settlement of the claim? .. .. 30
4. Is it usual in Personal Accident Insurance to charge an additional premium for any or all of the following risks? If so, state what you would consider to be an adequate additional premium in each case:—
  - (a) Motor Cycling.
  - (b) Cricket.
  - (c) Hunting.
  - (d) Swimming.
  - (e) Ordinary Cycling.
  - (f) Football.
  - (g) Hockey. .. .. 25
5. What is the essential point in an endorsement for a Personal Accident Policy where the Proposer has lost his right arm? .. .. 20
6. Would you regard a Proposer who has suffered from diabetes as eligible for a policy providing compensation for accidents, but excluding disablement due to sickness or disease? .. .. 15
7. Is a person of advanced age regarded as a suitable subject for—
  - (a) Accident, and
  - (b) Sickness Insurance?

Give reasons for your answer .. .. 20
8. What is the shortest time for which a claim for sickness under an All Sickness Policy is usually allowed, and why is this term fixed?.. .. 10

Marks.

9. Would you exclude from the scope of a Sickness and Disease Policy the following diseases, if the Insured had suffered from them either prior to the issue of the Policy or during its currency? Give your reasons :—
- |                     |    |
|---------------------|----|
| (a) Tonsilitis;     |    |
| (b) Scarlet Fever;  |    |
| (c) Malaria .. .. . | 25 |
10. Give a simple rendering of the terms :—
- |                           |    |
|---------------------------|----|
| (a) Angina Pectoris;      |    |
| (b) Acute Bursitis;       |    |
| (c) Hydrocephalus .. .. . | 25 |

### ACCIDENT BRANCH.

#### Part II., Subject D.—PUBLIC LIABILITY RISKS.

*Two hours allowed for this paper.*

#### QUESTIONS.

- Specify the different classes of Policy issued to cover Public Liability risks .. .. . 25
- Define in general terms the liability covered under—
 

(a) Third party—Drivers—Policies.	
(b) Third party—General—Policies.	
(c) Lift Policies.	
(d) Property Owners Liability Policies.	
(e) Third party—Motor Vehicles (Commercial)—Policies .. .. .	40
- State the principal conditions governing Third Party Indemnity contracts .. .. . 35
- What hazards should be taken into consideration in underwriting Third party driving and general trade risks? .. .. . 35
- What is the general system of rating in each of the following public liability risks :—
 

(a) Third party Drivers.	
(b) Third party General.	
(c) Lifts.	
(d) Property Owners Liability .. .. .	30
- In surveying a Third party risk in connection with a shop, warehouse, or other similar building, what information should be elicited by the Surveyor? .. 35

## ACCIDENT BRANCH.

Part II., Subject E.—FIDELITY GUARANTEE, BURGLARY, MOTOR  
CAR AND OTHER CONTINGENCY RISKS.

*Two-and-a-half hours allowed for this paper.*

## QUESTIONS.

*Marks.*

*Fidelity Guarantee.*

1. State the chief points to be taken into consideration in judging Fidelity Guarantee risks . . . . . 20
2. (a) What is the difference between the scope of the cover given by the ordinary policy in respect of Mercantile appointments and that given by the special forms of Bond usually required by Government Departments?
- (b) What are the special conditions, as regard renewals, contained in the special forms of Bond usually required by Government Departments? . . . . . 20
3. In the case of a traveller or other employee collecting money, what is the best method of securing an effective check on the correctness of his accounts? . . . . . 10
4. What is the method of ascertaining the termination of liability under—
  - (a) A Bond furnished to the Chancery Division of the High Court of Justice?
  - (b) A Bond issued to the Probate Division of the High Court of Justice in respect of an Administrator? . . . . . 20

*Burglary.*

5. Give method of rating, principal stipulations made, and general terms granted in connection with an Insurance of—
  - (a) Cash in Safe;
  - (b) Cash in transit . . . . . 20
6. Enumerate the principal vulnerable points of a normally occupied modern flat, and the precautionary measures that should be adopted to render the material hazard satisfactory . . . . . 20
7. State some of the principal objections to granting cover against Larceny in connection with trade risks . . . . . 15
8. Notification is received that thieves have entered the premises of a tobacconist insured with the Company. Give briefly the preliminary and subsequent method of procedure for investigating and adjusting the loss . . . . . 15



*Motor Car and other Contingency Risks.*

9. Some Companies in their Public Liability Policies reserve the right to retire from a claim at any time by paying the stipulated "One Accident" limit, plus the amount of costs incurred with their consent up to that point. Give arguments from the Company's point of view as to the reasonableness of this clause . . . . . 20
10. State in tabulated form the cover now generally given under a "Comprehensive" Private Motor Car Policy 10
11. Write a letter in answer to the holder of a "Comprehensive" "Valued" Policy who objects that at the first renewal:- -
- (1) The Company have written down the amount of the value of the car, and
- (2) Have apparently not reduced the premium in proportion . . . . . 30

ACCIDENT BRANCH.

Part II., Subject F.—POLICY FORMS, CONDITIONS, AND ENDORSEMENTS.

*Two-and-a-half hours allowed for this paper.*

QUESTIONS.

1. Draft an endorsement for an All Sickness and Accident policy, excluding Laryngitis . . . . . 10
2. Re-draft the following part of a Personal Accident policy so as to bring it into conformity with the usual terms of Personal Accident policies:—
- “If the Insured shall sustain any bodily injury caused by accidental means, and should such injury—
- (a) Cause the death of the Insured, the Company shall pay the sum of.....
- (b) Cause the loss of both hands or feet, or one hand and one foot, or loss of sight in both eyes, or loss of one hand or foot and loss of sight in one eye, the Company shall pay to the Insured the sum of.....” . . . . . 30
3. What are the chief points of difference between an ordinary All Sickness and Accident policy and a permanent Sickness and Accident policy? . . . . . 25
4. Draft an endorsement for a Burglary policy, extending the period of unoccupancy of a private dwelling-house to six months . . . . . 20
5. What is the definition of “premises” in the case of a Burglary policy covering the contents of a private dwelling-house? . . . . . 10

Marks.

6. A. B., the holder of an Employers' Liability policy, having undertaken a sub-contract for C. D., it is desired that the policy should be endorsed indemnifying C. D. against any claim for personal injury made on him under Section 4 of the Workmen's Compensation Act, 1906, by any workman in the employment of A. B. Draft the endorsement . . . . 25
7. What is the usual condition of a Third Party policy relating to the conduct or control of proceedings in the event of a claim? . . . . . 20
8. In which of the following Fidelity Guarantee cases can the Company's ordinary policy form be used, and what form of policy is required in each of the other cases :—
- (a) Collector of Income Tax; (b) Wine Merchant's Traveller; (c) Hardware Traveller; (d) Relieving Officer; (e) Inspector of Poor (Scotland); (f) Manager of Boot Shop; (g) Labour Exchange Official; (h) Distributor of Stamps; (j) Mercantile Clerk; (k) Trustee in Bankruptcy? . . . . . 15
9. What stamp duties are required in respect of the following policies :—(a) Employers' Liability; (b) Motor Car (Comprehensive); (c) All Sickness and Accident; (d) Fidelity Guarantee (ordinary); (e) Fidelity Guarantee (Friendly Society Officials)? . . . . . 10
10. Draft an endorsement extending a full Motor Car policy to cover Continental risks for a period of three months, it having been arranged that no extra premium shall be charged, but that the Insured shall bear the first £10 of every claim . . . . . 25
11. Is liability under contract covered by a Public Liability policy? What is meant by the expression? . . 10

### ACCIDENT BRANCH.

Part III., Subject A.—CORRESPONDENCE.

*Two hours allowed for this paper.*

#### QUESTIONS.

1. An old connection who has reached the age of eighty makes a claim in respect of an accident. It transpires that he is not in good health. You meet the claim—the first he has had in thirty years—and decide that on the next renewal date you will intimate to the Assured that you do not propose to renew his Personal Accident policy. Draft the necessary letter 30

Marks.

2. A policy-holder has intimated that a claim is to be made under his Burglary policy in respect of an act of larceny said to have taken place two months ago. He is a valuable connection and you may find it necessary to admit the claim. Write him an appropriate letter 25
3. A young medical man is insured under a Personal Accident policy and has on two occasions met with accidents resulting each time in an injury to the semi-lunar cartilage of the right knee. You decide to "bar" this knee for the future. Draft the letter you would write him just before the next renewal date . . . . 25
4. A W.C.A. policy-holder whose business is that of a builder writes to say that he is undertaking a well-sinking contract (such work not being covered by his policy). Write a letter asking for the necessary particulars to enable you to quote . . . . 30
5. The members of a Volunteer Fire Brigade are insured under a Personal Accident policy for benefits of £100 at death and 30s. weekly for temporary total disablement. The Brigade has also been insured under the Workmen's Compensation Act, and for this reason the members, being of the opinion that the benefits of the Workmen's Compensation Act will be sufficient for their requirements, propose to discontinue the Personal Accident policy. Write a suitable letter to the Brigade urging its continuance . . . . 30
6. A W.C.A. policy-holder writes stating that whereas one of his workmen in receipt of compensation, and being also an insured person under the National Act, has hitherto received medical treatment at a hospital, the hospital authorities have now informed the workman that owing to the passing of the National Insurance Act they are no longer prepared to treat him. The employer asks whether the Insurance Company will pay the medical expenses in future, and, if not, what the workman is to do. Reply suitably . . . . 30
7. It having come to your knowledge that a W.C.A. policy-holder is not keeping a wages book, write a suitable letter requesting him to do so, explaining the reason therefor . . . . 30

### ACCIDENT BRANCH.

Part III., Subject B.—CLAIMS AND THEIR SETTLEMENT.

*Two-and-a-half hours allowed for this paper.*

#### QUESTIONS.

1. A collier, whilst having his breakfast at home, cuts his finger, puts a piece of rag round it and goes to work.

Marks.

Whilst he is hewing coal the rag works loose, and after a few days blood poisoning supervenes at the wound and a long period of disablement ensues. A claim for compensation is made ; there is no evidence of any accident having happened whilst he was at work, but it is alleged that the blood poisoning arose from coal dust entering the wound whilst the collier was at work. Would you admit liability, or not? Give reasons . . . . . 15

2. An office boy goes on his cycle to and from his home to the office where he is employed, but does not ordinarily use the cycle for his employer's business. He is given a letter to deliver at a certain customer's office ; he intends to deliver it as he cycles home, but on his way he is run down by a motor car. Is the employer liable? Give reasons . . . . . 20

3. A workman suffering from an aneurism in so advanced a stage that it might have burst at any moment was tightening a nut with a spanner when the aorta gave way. The County Court Judge found that death was due to strain arising from ordinary work. The House of Lords upheld the finding (*Clover, Clayton & Co., Ltd., v. Hughes*).

A collier who was doing somewhat heavy work was seized with apoplexy and died very quickly. There was evidence that the man's arteries were so degenerated that they might have been ruptured with or without strain. The County Court Judge found that death was due to strain arising from ordinary work. The House of Lords reversed the decision (*Barnabas v. Bersham Colliery Co.*).

Reconcile these two cases, and give some general rule to guide a claim settler in dealing with similar cases . . 30

4. (a) If a domiciled Austrian (A) be employed temporarily in Great Britain by a British firm and meet with a non-fatal accident which would entitle a British workman to compensation, would the Austrian be entitled to recover? (b) Assume A is killed. Will his wife living with him in Great Britain be entitled to the usual death allowance? (c) If the wife be resident in Austria at the time of the accident, can she claim? . . 15
5. What doctrine or principle did the House of Lords' case, *Fenton v. J. Thorley & Co., Ltd.* (1903), abolish? . . 15
6. A workman meets with an accident which temporarily totally disables him ; his employers admit liability and pay him half wages, stating that they will continue to

do so till their Doctor certifies that total disablement is at an end. The workman applies for a Memorandum of Agreement in general terms to be recorded. Record is refused. The workman demands arbitration on the ground that the Workmen's Compensation Act provides therefor "if any question arises." What decision should the County Court Judge arrive at, and why? 20

7. You insure A under a Drivers' (Third Party) policy. A is driving his trap in frosty weather: it skids on some ice, collides with another vehicle and does considerable damage. The owner of the damaged vehicle sues A. Would you pay or resist? Give reasons . . . . 15

8. A golfer insured under a Personal Accident policy (no diseases covered) blisters his hand whilst playing: he continues playing, the blister breaks and blood poisoning ensues. The definition of accident in the policy is as follows:—"Something violent, accidental, "external and visible, which independently and directly "causes bodily injury."

Is the golfer entitled to claim? Give reasons . . . . 15

9. Under a Fidelity Guarantee policy an Insurance Company undertakes to reimburse an employer in respect of any loss he may sustain "by any act of larceny or embezzlement on the part of " the person employed. A claim is made; the employee pleads that the question between him and his employer is one of account. What is essential in order to prove embezzlement? . . 15

10. You cover a certain school authority in respect of claims brought against them by Third Parties. A child (X), aged thirteen, attends their public elementary school. The school authorities arrange with a jobmaster to take children living some three miles away from the school backwards and forwards daily in some conveyance. X lives only one mile away from the school, but often makes use of the said conveyance. One day as X is getting out of the conveyance the driver starts without warning. X is badly hurt, and her parents claim against the school authorities. On what points would you ask for further information in order to decide whether to admit or deny liability? Assume and set out any additional facts you may consider necessary to complete your case, and then state what decision as regards the liability of the school authorities you come to, giving reasons for your decision . . 25

11. A Burglary policy covering business premises contains a clause that there shall be no claim for loss by theft,



Marks.

robbery, or misappropriation by members of the Assured's household. A servant of the Assured, by arrangement, leaves a window unlatched, a thief opens the said window, and both the thief and the servant decamp with a considerable amount of valuables. What claim has the Assured against the Company?.. 15

### ACCIDENT BRANCH.

Part III., Subject C.—PHYSIOLOGY, ANATOMY.

*Two hours allowed for this paper.*

#### QUESTIONS.

1. What is the Clavicle? With what bones does it articulate? 20
2. Name the compartments of the heart and indicate the course taken by the blood stream from the Venæ Cavæ to the Aorta .. .. 40
3. What is the Trachea and where is it situated? .. 20
4. Name the bones that form the bony framework of the chest 20
5. Name in order from above downwards the different portions of the Alimentary Canal .. .. 40
6. What are the Ureters? At what organ do they commence and where do they end? .. .. 40

### ACCIDENT BRANCH.

Part III., Subject D.—LAW.—THE RELATIONSHIP BETWEEN EMPLOYER AND EMPLOYED, VIZ. :—

AT COMMON LAW; UNDER THE FATAL ACCIDENTS ACT, 1846 TO 1908; THE EMPLOYERS' LIABILITY ACT, 1880; AND THE WORKMEN'S COMPENSATION ACT, 1906.

*Two hours allowed for this paper.*

#### QUESTIONS.

*Common Law.*

1. At Common Law, is there any duty on a master personally to superintend the work he has contracted to do? .. 18
2. If an accident occurs through machinery not being fenced in terms of the Factory Acts, the employer is liable under the Employers' Liability Act, 1880. Does such neglect of a statutory duty also make him liable at Common Law if he can show that he took no active part in the business and that the negligence was in reality attributable to the fault of a fellow servant of the injured workman? .. .. 18

*The Fatal Accidents Act, 1846 to 1908.*

3. Can a father recover funeral expenses for burying an unmarried (infant) daughter whose death was caused by reason of the Defender's negligence and who was residing with her father at the time of the death? .. 18
4. (a) What is the provision of the Act as to the time within which action may be brought?
- (b) Is there any exception to this rule?
- (c) Does the period begin from the date of accident or the date of death? .. .. . 25

*The Employers' Liability Act, 1880.*

5. In what Court—  
 (a) in England,  
 (b) in Scotland,  
 (c) in Ireland  
 must an action be commenced; and  
 (d) upon whose application (employer or employed or both) may the action be removed into a Superior Court—keeping in view the exception (per Section 14 of the Workmen's Compensation Act, 1906) in connection with an Appeal so far as Scotland is concerned? .. .. . 18
6. Section 5 refers to money payable under penalty (under other Acts of Parliament) having to be deducted from compensation under the Employers' Liability Act, 1880. Can you explain (briefly) to what this reference to penal compensation refers, or give an instance of such? .. .. . 18
7. In the case of ordinary injury, is the condition, that written notice must be given within six weeks, absolute (*i.e.*, interpreted strictly); or is the want of such notice no bar to the maintenance of an action if a Judge shall be of opinion that there was reasonable excuse for such notice? .. . 18

*The Workmen's Compensation Act, 1906.*

8. The term "workman" does not include any person who is employed otherwise than for the purpose of the employer's trade or business. A County Council is not engaged in any trade or business; yet the casual employees of a County Council are entitled to compensation under the Act. How does the Act itself reconcile this apparent discrepancy? .. .. . 25
9. In the case of the death of a workman who, at the time of an accident, had been three years in the same

Marks.

continuous employment, is the compensation payable to the total dependants to be taken as his "earnings" during the same three years, or as his "average weekly earnings" during that period? .. .. 18

10. Formerly (in Scotland) actions served, claiming alternatively at Common Law and under the Employers' Liability Act, 1880, could be removed, by way of appeal, for trial in the Court of Session; but Section 14 of the Workmen's Compensation Act, 1906, stipulates that the trial must now take place only in the Sheriff Court. Does this limitation in Section 14 apply to a "workman" alone; or does it also extend to any similar claim by the legal representatives of a deceased person? .. .. 24

### ACCIDENT BRANCH.

Part III., Subject E.—COURT PROCEDURE UNDER WORKMEN'S COMPENSATION ACT, 1906.

*Two-and-a-half hours allowed for this paper.*

#### QUESTIONS.

1. In the event of a conflict of interests between the dependants themselves in an application for the settlement by arbitration of the amount payable as compensation to the dependants of a deceased workman, what course is laid down by the rules of Court? 10
2. If an injured workman were illiterate, and therefore unable to furnish in writing the information required in a "Request for Arbitration," is there any means open to him—other than the employment of a solicitor—to have his case brought forward for decision? 10
3. Where a respondent claims that if compensation is recovered against him he will be entitled under Section 6 to indemnity from a third party, specify what are the Judge's powers as to deciding the question of the liability of the third party .. .. 20
4. What course is open to a workman who claims to be entitled to compensation from a bankrupt employer, but is unable to ascertain that the employer is insured? 15
5. Where, in the opinion of the Registrar, a Memorandum of an Agreement as to the redemption of a weekly payment by a lump sum should not be recorded because of the inadequacy of the lump sum, what procedure do the rules provide to be followed by Registrar and Judge? .. .. 20

Marks.

6. What are the three principal rules which govern the selection of the County Court in which proceedings may be taken? .. .. . 20
7. As a result of the passage of the National Insurance Act, 1911, what additional information is it now incumbent under the rules to supply when a Memorandum of Agreement with a workman is presented for registration? .. .. . 10
8. What regulations has an injured workman, who is a French citizen, who has returned to reside in France, to comply with in order to receive the compensation which has been awarded to him? .. .. . 20
9. What procedure must a workman who claims to be entitled to compensation from an employer who has become bankrupt, and whom he knows to be insured with a specified Insurance Company, adopt in order to recover from the Insurance Company the amount of the liability which has been transferred to the Insurers? .. .. . 20
10. Where notice of motion has been served of an appeal to the Court of Appeal from a decision of a Judge of the County Court, under what circumstances shall the appeal operate as a stay of proceedings under the decision appealed from? .. .. . 20
11. In the event of an employer being aggrieved at the action of a certifying surgeon in giving to one of his workmen a certificate of disablement from an industrial disease, what course is laid down for him? .. .. . 20
12. What is the period within which notice of motion shall be served and appeal entered in the case of an employer desiring to appeal to the Court of Appeal, from a decision of a Judge of the County Court, and from what time shall such period be calculated? .. .. . 15

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### ACCIDENT BRANCH.

Part III., Subject F.—ACCOUNTS AND INVESTMENTS, INCLUDING BOARD OF TRADE RETURNS, AS REQUIRED BY THE ASSURANCE COMPANIES ACT, 1909.

*Two-and-a-half hours allowed for this paper.*

#### QUESTIONS.

1. State the requirements of the Board of Trade as narrated in the notes appended to the form of Balance Sheet prescribed in the 3rd Schedule to the Assurance Companies Act, 1909 .. .. . 20

Marks.

2. A Company transacting Employers' Liability business is being wound up by the Court. State the rules prescribed by the 6th Schedule to the Assurance Companies Act, 1909, for (a) the value of a weekly payment; (b) the value of a policy .. .. . 25
3. Wherein does the form of Revenue Account prescribed for Employers' Liability Companies by the 1st Schedule to the Assurance Companies Act, 1909, differ from that applicable to Fire Companies? Why should this difference exist? .. .. . 20
4. What is a Revenue Account? Show how a Revenue Account according to the form adopted in the Assurance Companies Act, 1909 acts as a link between two consecutive Balance Sheets .. .. . 20
5. A new Company has spent part of its paid-up capital in establishing the business. State two distinct ways in which this expenditure may be dealt with in the Accounts, and the requirements of the Board of Trade in this connection .. .. . 25
6. What is a "Gilt-Edged" Security? Securities so styled have depreciated greatly in recent years. State various causes to which the fall is attributed .. 25
7. Distinguish between—
  - (a) Authorised, Subscribed, and Paid-up Capital.
  - (b) Inscribed, Registered, and Bearer Stock Exchange Securities .. .. . 20
8. Why are Mortgages and Short Term Securities recommended for investment purposes when the prices of ordinary Stock Exchange securities are at a high level? 25
9. What is "Bank Rate"? State briefly the conditions leading in ordinary circumstances to its rise and fall 20





# NAMES OF SUCCESSFUL CANDIDATES—1913.

The following is the Official List of the successful Candidates at the Examinations held simultaneously at the various Insurance Centres, March 3rd to 14th, 1913. The letter "P" opposite a name signifies Pass, "H" Honours, and "C" Certificate.

FIRE BRANCH.																					
NAME AND OFFICE.	PART I.					PART II.					PART III.										
	Chemistry (Elementary).	Electricity (Elementary).	Book-keeping.	Mathematics.	Geography.	Building Construction.	Correspondence.	Common Hazards.	Plan Drawing.	Policy Drafting. Public Property. Soap Works.	Processes. Cotton. Soap.	Average Clauses.	Law of Fire Insurance.	Fire Extinguishment.	Principles of Fire Insurance.	Chemistry.	Electricity.	Loss of Profits.	Foreign Policy Conditions.	French Language.	Foreign Correspondence.
ABERDEEN.	..	..	..	..	..	..	P	..	..	P	H	..	..	..	..	..	..	P	..	..	..
Anderson, Arthur, <i>British Crown</i>	..	..	..	..	..	..	..	..	..	..	H	..	..	..	..	..	..	..	..	..	..
Duffus, John W., <i>Alliance</i>	..	..	..	..	..	..	..	..	..	..	H	..	..	..	..	..	..	..	..	..	..
Hendry, Charles M'C., <i>Royal</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Laird, Alexander, <i>Alliance</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Moir, Jun., Charles P., <i>Northern</i>	..	..	..	..	..	..	P	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Williams, James L., <i>Northern</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
BANGOR.	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Jones, Thomas L., <i>Liverpool and London and Globe</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..



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## NAMES OF SUCCESSFUL CANDIDATES, 1913—continued.

NAME AND OFFICE.	PART I.					PART II.						PART III.									
	Chemistry (Elementary).	Electricity (Elementary).	Book-keeping.	Mathematics.	Geography.	Building Construction.	Correspondence.	Common Hazards.	Plan Drawing.	Policy Drafting. Public Property. Soap Works.	Cotton. Soap. Processes.	Average Clauses.	Law of Fire Insurance.	Fire Extinguishment.	Principles of Fire Insurance.	Chemistry.	Electricity.	Loss of Profits.	Foreign Policy Conditions.	French Language.	Foreign Correspondence.
BIRMINGHAM—continued.																					
Whiteside, Thomas H. G., <i>Law Union and Rock</i>	..	..	..	..	..	..	..	..	P	..	..	..	..	..	..	..	..	..	..	..	..
Williams, Edgar J., <i>Scot. Un. and National</i>	..	..	..	..	..	P	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Wood, Leslie S., <i>Comm'l. Union.</i>	..	..	..	..	..	..	..	P	..	..	P	..	..	..	..	..	..	..	..	..	..
BRADFORD.																					
Bower, John A., <i>Union ...</i>	U	..	C	..	..	P	..	P	..	..	H	..	..	..	..	..	..	..	..	..	..
Barker, Edward T., <i>Scot. Un. and National</i>	..	..	..	..	..	..	..	P	..	..	..	..	..	..	..	..	..	..	..	..	..
Barker, Joseph H., <i>Scot. Un. and National</i>	..	..	..	..	..	..	..	..	..	..	..	..	H	..	..	..	..	..	..	..	..
Brown, Harry P., <i>Scot. Un. and National</i>	..	..	..	..	..	..	..	..	..	..	..	..	P	..	..	..	..	..	..	..	..
Depledge, Arthur C., <i>Sun Fire ...</i>	..	..	..	..	..	..	P	P	..	..	..	H	..	..	..	..	..	..	..	..	..
Hodgkinson, Frank M., <i>Fine Art and General</i>	..	..	..	..	..	..	..	P	..	..	..	H	..	..	..	..	..	..	..	..	..
Wright, Harry R., <i>London and Lancashire</i>	..	..	..	..	..	..	..	..	P	..	..	..	..	..	..	..	..	..	..	..	..







## COLCHESTER.

Angell, Ernest W., *Essex and Suffolk*

## DUBLIN.

Campbell, Ernest W., *London and Lancashire*

Christie, James S., *Caledonian* ...  
 Corrigan, Thomas H., *Sun* ...  
 Cullen, Joseph, *Hibernian* ...  
 Dixon, George F., *Comm'l. Union* ...  
 Haughton, Joseph A., *Alliance* ...  
 Johnson, Harry J., *Comm'l. Union* ...  
 Joyce, Gordon F., *Royal* ...  
 Kyrke, George F., *Northern* ...  
 Leeson, John J., *Royal Exchange* ...  
 Porter, Geo. F. L., *Jun., Sun* ...  
 Sharp, Wm. H., *Comm'l. Union*

## DUNDEE.

Lindsay, John M., *Liverpool and London and Globe*

Myles, David, *Royal Exchange* ...  
 Sharp, Walter J., *London and Lancashire* ...  
 Simpson, Alex. M., *State* ...

## EDINBURGH.

Arthur, James A., *Norwich Union*  
 Broomfield, John, *Royal* ...  
 Brown, Thomas E., *Scot. Un. and National*



[illegible]



[illegible]

[illegible]



[illegible]





## LIVERPOOL.

[illegible]

NAMES OF SUCCESSFUL CANDIDATES, 1913—continued.

Hume, Wm. W. K., <i>London and Lancashire</i>	...
Isaac, Fredk. H., <i>Law Union and Rock</i>	...
Jones, Joseph H., <i>State</i>	...
Jones, J. Lloyd, <i>Royal</i>	...
Jones, Thomas O., <i>Comm'l. Union</i>	...
Kelly, Wm. P., <i>Liverpool and London and Globe</i>	...
Laver, Edgar J., <i>Royal</i>	...
Leech, Frank, <i>Phœnix</i>	...
Lewis, Cecil M., <i>Royal</i>	...
Lunt, Arthur T., <i>State</i>	...
M'Clay, Harold, <i>Royal</i>	...
M'Clelland, Howard W., <i>Royal</i>	...
M'Connachie, Alexander, <i>Royal</i>	...
Marsden, Arthur E., <i>Liverpool and London and Globe</i>	...
Martin, John L., <i>Royal</i>	...
Mills, George H., <i>Liverpool and London and Globe</i>	...
Murphy, Ernest, <i>Royal</i>	...
Musker, Joseph W., <i>Liverpool and London and Globe</i>	...
Nutt, Geoffrey E., <i>Northern</i>	...
Owen, Arthur E., <i>Royal</i>	...
Owen, John V., <i>Liverpool and London and Globe</i>	...
Owen, Richard, <i>Royal</i>	...
Perreyman, Wm. T., <i>State</i>	...
Price, George K., <i>Liverpool and London and Globe</i>	...
Quinlan, James L., <i>Liverpool and London and Globe</i>	...
Radcliffe, Chas. E., <i>Jun., Royal</i>	...
Reid, Alexander, <i>Jun., Liverpool and London and Globe</i>	...



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[illegible]



Mitchell, George E., *Royal* ...  
Mott, Albert W., *Yorkshire* ...  
Newstead, Cecil J., *General*  
*Accident*  
Nisbet, Kenneth J., *Fine Art and*  
*General*  
Phillips, Charles W., *Horse,*  
*Carriage, and General*  
Philpot, Sidney H., *Fine Art*  
*and General*  
Pike, Herbert T., *London Guar.*  
*and Accident*  
Pocock, Bernard L. F., *Northern*  
Pocock, Norman S. D., *Northern*  
Powell, Edgar K., *Guardian* ...  
Rees, Kingsford B., *Union* ...  
Reid, C. W. F., *North British*  
*and Mercantile*  
Relton, Arthur G., *Alliance* ...  
Richards, George L. W., *Fine*  
*Art and General*  
Richardson, Wm. J., *Northern* ..  
Robinson, Bernard A., *Commercial*  
*Union*  
Rowland, Reginald H., *Phoenix*  
Silverthorne, Albert G. T.,  
*Northern*  
Smith, Herbert, *Liverpool and*  
*London and Globe*  
Smith, Walter J., *County*  
Spaull, Fredk. J., *Consolidated* ...  
Spencer, Fredk. W., *South British*  
Stacey, Maurice, *Norwich Union*  
Stearns, Eric G., *Sun* ...  
Stearns, Hubert G., *Alliance* ...  
Stenning, Harold G., *Alliance* ...

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Mitchell, George E., *Royal ...*  
Mott, Albert W., *Yorkshire ...*  
Newstead, Cecil J., *General*  
*Accident*  
Nisbet, Kenneth J., *Fine Art and*  
*General*  
Philips, Charles W., *Horse,*  
*Carriage, and General*  
Philpot, Sidney H., *Fine Art*  
*and General*  
Pike, Herbert T., *London Guar-*  
*and Accident*  
Pocock, Bernard L. F., *Northern*  
Pocock, Norman S. D., *Northern*  
Powell, Edgar K., *Guardian ...*  
Rees, Kingsford B., *Union ...*  
Reid, C. W. F., *North British*  
*and Mercantile*  
Relton, Arthur G., *Alliance ...*  
Richards, George L. W., *Fine*  
*Art and General*  
Richardson, Wm. J., *Northern ...*  
Robinson, Bernard A., *Commercial*  
*Union*  
Rowland, Reginald H., *Phoenix*  
Silverthorne, Albert G. T.,  
*Northern*  
Smith, Herbert, *Liverpool and*  
*London and Globe*  
Smith, Walter J., *County ...*  
Spaull, Fredk. J., *Consolidated ...*  
Spencer, Fredk. W., *South British*  
Stacey, Maurice, *Norwich Union*  
Stearns, Eric G., *Sun ...*  
Stearns, Hubert G., *Alliance ...*  
Stenning, Harold G., *Alliance ...*





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## NORTHAMPTON.

Chamberlain, Wm. D., *Liverpool and London and Globe*  
Depledge, Otto F., *North British and Mercantile*  
Paine, Ernest W., *Liverpool and London and Globe*  
Saddington, Ernest A., *North British and Mercantile*  
Shaw, Charles C., *Liverpool and London and Globe*

## NORWICH.

Booty, Francis C., *Norwich Union*  
Finch, George F., *Norwich Union*





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ACCIDENT BRANCH.

[illegible]





## BRISTOL.

Caines, Leslie G. D., *Royal* ...  
 Cockle, Henry M., *Sun* ...  
 Grace, Vivian, *London and Lancashire* ...  
 Hogg, Frank A., *Commercial Union* ...  
 Hooper, Gilbert W., *Phoenix* ...  
 Hunniford, Wm. H., *Sun* ...  
 Mortimer, Edmund A., *Car and General* ...  
 Petrie, Lionel W., *London and Lancashire* ...  
 Wynes, Fredk. B. G., *London and Lancashire* ...

## CARDIFF.

Bussell, John C., *Ocean* ...  
 Dorman, William, *Welsh* ...  
 Evans, Ernest C., *Ocean* ...  
 Gummer, Fred., *Commercial Union* ...  
 Pitcher, Edgar T., *Liverpool and London and Globe* ...  
 Powell, Hugh G., *Royal* ...  
 Ramsden, Harold, *Central* ...  
 Smith, Norman T., *Employers' Liability* ...

## CORK.

Grey, Arthur O., *Northern* ...  
 O'Riordan, Charles, *Yorkshire* ...

## DUBLIN.

Barton, Edward G., *Northern* ...  
 Fox, Francis P., *Royal Exchange* ...  
 Horner, Gordon S., *Yorkshire* ...  
 Jones, Nicholas J., *Atlas* ...  
 Keely, Charles Wm., *Commercial Union* ...  
 Stedmond, N. G., *Hibernian* ...



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LIFE BRANCH.

NAME AND OFFICE.	PART I.					PART II.						PART III.				
	(Elementary). Chemistry	(Elementary). Electricity	(Elementary). Book-keeping	Mathematics.	Geography.	Elementary Human Physiology.	Use of Compound Interest, etc., Tables.	Meanings of Common Medical Terms.	Climatic Geography.	Proposals, Claims, Loans, etc.	Forms of Policies and General Conditions.	Law affecting Life Policies.	Correspondence. Principal Tables of Mortality.	Life Office Valuations.	Sources of Profit.	Life Office Accounts.
BELFAST.																
Brown, Archibald, <i>Scottish Amicable</i>	..	..				P	..	..	P	P	H	..	..	..	..	..
Davidson, Wm. S., <i>Scottish Amicable</i>	..	..				..	..	..	..	D	..	..	..	..	..	..
Gillespie, Norman A., <i>Scottish Amicable</i>	..	..	O	O	O	..	..	..	..	..	H	..	..	..	..	..
Toms, Stanley W., <i>Commercial Union</i>	..	..	O	O	O	P	..	..	..	..	..	..	..	..	..	..
BIRMINGHAM.																
Clarke, Firstbrook, <i>Scottish Widows...</i>	C	..	..	O	O	P	..	H	..	..	P	..	..	..	..	..
Redfern, Joseph S., <i>Abstainers and General</i>	..	..	..	..	O	H	..	..	..	..	H	..	..	..	..	..
BRISTOL.																
Goodwin, Leslie H., <i>Royal Exchange</i>	..	..	..	..	..	P	..	..	P	..	..	..	d	..	..	..
Jones, Edward S., <i>Union</i>	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
CARDIFF.																
Davies, Thomas W., <i>Edinburgh</i>	..	..	O	O	O	P	.	P	P	P	P	..	..	..	..	..
DUBLIN.																
Kelly, Cecil G., <i>Alliance</i>	C	..	O	O	O	P	..	..	P	..	P	..	..	..	..	..
DUNDEE.																
Adams, William, <i>Royal</i>	C	..	O	O	O	P	..	P	P	..	..	..	..	..	..	..

NAMES OF SUCCESSFUL CANDIDATES, 1913--continued.

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*The following Certificates have been accepted from Students whose names do not appear in the Pass List for 1913.*

### FIRE BRANCH.

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Alderdice, R. S., Hand-in-Hand, Belfast	...	...	C	C	C
Alexander, H. C., Northern, Dundee ...	C	...	C	C	...
Babidge, Arthur C., London and Lancashire Fire, Leeds	...	...	C	...	C
Baggs, G. P., General Accident, Manchester	...	...	...	C	...
Barnes, Francis H., Union, London ...	C	...	...	C	C
Beacroft, William, Legal, Nottingham	C	...	...	C	C
Beckingham, F., Ocean, Liverpool ...	...	...	C	C	C
Beech, Thomas B., Caledonian, Edinburgh	C	...	...	...	C
Belford, J. C., Royal, Newcastle-on-Tyne	...	...	C	C	C
Benger, A. H., Broker, London ...	...	...	C	C	C
Bexon, Vernon B., Royal, Manchester	...	...	...	...	C
Bishop, W. D., Law Fire, London ...	C	...	...	C	C
Blake, Fredk., North British and Mercantile, Doncaster	C	...	...	C	C
Box, Henry E., State, Bristol ...	C	...	...	C	C
Brearley, C. O., Union, Leeds ...	C	...	...	C	C
Briant, B. E. D., Royal Exchange, Brighton	C	...	...	C	C
Brown, J. Leslie, Alliance, Edinburgh	...	...	C	C	...
Bryant, Arthur B. R., Employers' Liability, London	C	...	...	C	C
Bullock, Leslie G., Commercial Union, London	C	C	...	C	C
Burgess, William, Caledonian, Aberdeen	...	C	...	C	C
Burgoyne, Albert H., Star, Bristol ...	...	...	C	C	C
Burton, H. J., Caledonian, Birmingham	C	...	...	...	...
Butlin, Paul T., Liverpool and London and Globe, Northampton	...	C	...	...	...
Cadenhead, William G., Advocate's Clerk, Aberdeen	C	...	...	C	C
Carroll, Anthony P., Employers' Liability, London	C	C	...	C	...
Cash, D., Midland and Textile, Manchester	...	...	...	C	...

**Fire Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Clarke, J. W., Fine Art and General, Leicester	...	...	C	C	C
Cloud, S. W., Scottish Union and National, London	...	...	C	...	...
Clydesdale, R., Norwich Union, Edinburgh	...	...	C	C	C
Cole, John T., Royal Exchange, London	C	...	...	C	C
Cooper, Ernest, Liverpool and London and Globe, London	C	...	...	C	C
Cotterill, Herbert S., Comm'l. Union, Exeter	C	...	...	C	C
Couch, Harold J., Comm'l. Union, Birmingham	...	C	...	C	C
Couper, James, Scottish Union and National, Edinburgh	...	...	C	...	...
Cowlam, Frank, Law Union and Rock, Leeds	...	...	C	...	...
Craig, Douglas N., King, Glasgow	C	C	C	...	...
Crawshaw, G. K., Alliance, Sheffield	...	...	C	C	C
Crooks, E. E., Law Union and Rock, Dundee	C	...	...	C	C
Cross, C., Ecclesiastical, London	C	...	...	C	C
Cuming, J. H., National Union, Constantinople	...	...	C	C	C
Cureton, H. R., Scottish Union and National, Birmingham	...	...	...	C	C
David, C. A., London and Lancashire Fire, Cardiff	C	...	...	C	C
Dixon, A. E., Norwich Union, Birmingham	...	...	C	C	C
Dixon, W., Northern Equitable, Newcastle-on-Tyne	C	C	C	...	...
Dyer, James Basil, County, London	...	...	C	C	C
Field, S. H., Yorkshire, Dublin	...	...	...	C	C
Fisher, Arthur, Legal, Newcastle-on-Tyne	...	...	C	C	C
Fletcher, J., British Equitable, Leeds	...	...	C	...	...
Forrest, Percy H., Comm'l. Union, Nottingham	...	...	...	C	C
Frost, L. A., Essex and Suffolk, Cambridge	...	...	C	C	C
Garry, K., Alliance, Nottingham	C	...	...	C	C
Gibson, W. L., Royal, Edinburgh	C	...	...	C	C
Gilchrist, Archibald, British Crown, Glasgow	C	...	...	C	C
Giles, B., Phoenix, Newcastle-on-Tyne	C	C	...	...	...
Goddard, G. C., Liverpool and London and Globe, London	...	...	C	C	C



**Fire Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Goodwin, J. H., Union, Bristol ...	...	...	C	C	C
Graham, L., North British and Mercantile, Edinburgh	C	...	...	C	C
Grainger, W. J. H., Liverpool and London and Globe, Newcastle-on-Tyne	C	...	...	...	...
Gray, C. F., Midland and Textile, London	...	...	C	C	C
Greenwood, N., Royal, Manchester ...	C	...	...	C	C
Hale, William, North British and Mercantile, Bristol	...	...	C	...	...
Hall, C. S., Sun, Cardiff ...	...	...	C	C	C
Hall, Frank, Jun., Comm'l. Union, Hull	...	...	C	C	C
Hall, Stanley, British Law, Newcastle-on-Tyne	...	...	C	...	...
Hammond, L. D., Sun, Leeds ...	...	...	C	C	C
Harris, J. L., Comm'l. Union, Leeds...	C	...	...	C	C
Harris, W. H., Sun, Plymouth ...	...	...	C	C	C
Haughton, Walter R., British Law, London	C	...	...	C	C
Hawkswell, Ernest G., Yorkshire, Sheffield	C	...	C	...	C
Hay, James A., Liverpool and London and Globe, Liverpool	C	...	...	C	C
Head, G. O., Northern, Bristol ...	C	...	...	C	C
Henderson, H., Norwich Union, Newcastle-on-Tyne	...	C	C	...	...
Henshall, D. E., Sun, London ...	C	...	...	C	C
Herdson, H. Arnold, Alliance, Edinburgh	...	...	C	...	C
Hewson, Ernest A., Royal Exchange, Sheffield	...	...	...	...	C
Hibbuid, E. E., Guardian, London ...	...	...	C	...	...
High, A. P., Royal London, London ...	C	...	...	C	C
Higham, Herbert G., Law Union and Rock, London	C	...	...	C	C
Hill, Guy S., Guardian, Birmingham	...	...	C	...	...
Hill, L. J., Midland and Textile, London	C	C	...	C	...
Hill, W. H. S., Midland and Textile, Birmingham	C	...	...	C	C
Hind, Norman E., Royal, Belfast ...	C	...	...	C	C
Holdsworth, E. B., Royal, Hull ...	C	C	C	C	C
Hopkins, Leslie W., Royal London Auxiliary, Cardiff	...	...	C	C	C
Howitt V. H., State, Newcastle-on-Tyne	..	...	C	C	C
Humphris, Eric R., Alliance, Bristol ...	C	...	...	C	C
Hutchings, J. G., Comm'l. Union, Exeter	...	...	C	C	C

**Fire Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Jackson, V. N., Sun, Manchester ...	...	...	C	C	C
Jefferson, H., Royal, Belfast ...	C	...	C	C	C
Jenkins, Donald T., Sun, Bristol ...	...	...	C	C	C
Johnson, W. T., Royal, Birmingham ...	C	C	...	C	C
Johnston, Leslie James, Comm'l. Union, Belfast	C	C	...	C	C
Keable, A., Ocean, London ...	...	...	C	C	C
Kelly, C. Gratton, Alliance, Dublin ...	C	...	C	C	C
Kendrick, H. C., Ocean, Hull ...	...	...	C	C	C
Kent, S. H., Alliance, Newcastle-on- Tyne	...	...	C	C	C
Lawson, D. B., National of Great Britain, Manchester	...	...	C	C	C
Leask, William, Century, Edinburgh ...	...	...	C	C	C
Leigh, Ernest, State, Manchester ...	C	...	...	C	C
Lewis, W. T., Ocean, Cardiff ...	...	...	C	C	C
Lind, James, Norwich Union, Glasgow	...	...	C	C	C
Lines, Cecil, Yorkshire, Sheffield ...	C	...	...	C	C
Lines, H., Law Union and Rock, Lon- don	C	...	...	...	...
Lines, P. F., Gresham, Birmingham ..	...	...	...	C	...
Lister, Edward I., Central, Leeds ...	C	C	...	C	C
M'Arthur, C., Guardian, Edinburgh	...	...	C	C	C
Macarthur, George, Royal, Glasgow ...	C	...	...	C	C
M'Daniel, J. V., Atlas, Dublin ...	...	...	C	C	C
M'Kay, D. A., Century, Edinburgh ...	C	...	...	C	C
Mackay, H. Neil, Royal Exchange, London	...	...	C	C	C
Mackenzie, Charles, Caledonian, Edin- burgh	C	...	...	C	C
Mackenzie, J. B., Alliance, Edinburgh	C	...	C	C	C
M'Lagan, John R., Norwich Union, Glasgow	C	...	C	C	C
M'Namara, George, Norwich Union, Manchester	...	...	...	...	C
Marcinkoski, C. F., Northern, Edin- burgh	C	...	...	C	C
Mason, S. R., North-Western, London	...	...	...	C	C
Measures, Albert M., Comm'l. Union, Birmingham	C	...	...	C	C
Milligan, C. E., Comm'l. Union, Belfast	C	...	...	C	C
Montgomery, A. C., Caledonian, Belfast	C	C	...	C	...
Morton, Edwin H., Sun, London ...	...	...	C	...	...
Mossley, Rene, British Crown, London	...	...	C	C	C
Murphy, J. W., London and Lanca- shire Life, Belfast	...	...	C	C	C

**Fire Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Newman, H. W., Northern, London	C	...	C	..	C
Noble, T. D., Dominion, Edinburgh ...	...	...	C	C	C
Oliver, James G., Royal Exchange, Newcastle-on-Tyne	..	...	C	C	C
Ovenstone, Robert S., Atlas, Glasgow	...	...	C	C	C
Palmer, W., Royal, Belfast ...	C	...	...	C	C
Parker, T. R., Royal Exchange, Dub- lin	...	...	C	C	C
Parkhill, Ernest I., Royal, Belfast ...	...	..	C	C	C
Pearson, A. H., Royal London, Lon- don	...	...	C	..	..
Pearson, C., Central, Leeds ...	C	C	...	C	C
Pennycook, E. H., Northern, Edin- burgh	C	...	...	C	C
Pinkerton, Andrew, Phœnix, Glasgow	C	...	...	C	..
Pope, Howard J., Royal Exchange, Bristol	...	...	C	C	C
Pullein, Thomas H., Yorkshire, Leeds	C	...	...	C	C
Pulton, Samuel D., Sun, Plymouth ...	...	...	C	C	C
Ragg, T., Sun, London ...	...	...	C	C	C
Randall, Harry L., Comm'l. Union, Exeter	...	...	C	C	C
Rankin, Robert, Fine Art and General, Glasgow	...	...	C	C	C
Raper, Percy S., North British and Mercantile, Leeds	...	C	C	C	...
Richardson, D. S. P., London Assur- ance, Bristol	C	...	C	...	C
Richardson, H., Comm'l. Union, Leeds	...	...	C	...	...
Richardson, R., Yorkshire, Leeds ...	...	C	...	...	...
Roberts, R. Jesse, Comm'l. Union, Newcastle-on-Tyne	C	...	...	C	C
Robertson, Haldane S., North British and Mercantile, Northampton	...	...	...	C	C
Robertson, R. A., Northern, London	...	...	C	C	C
Rose, Thomas, North British and Mercantile, Edinburgh	...	...	C	C	C
Robinson, H., Comm'l. Union, Leeds	C	...	C	C	...
Routh, H., Liverpool Victoria, Leeds	...	...	C	...	...
Rutherford, Harold, Comm'l. Union, Birmingham	C	C	...	...	C
Ryle, Ernest, Northern, Newcastle-on- Tyne	C	...	C	C	...
Scriven, W. B., Law Fire, London ...	...	...	C	C	C
Selby, Arthur F., Alliance, Birmingham	C	...	...	C	...
Shanks, Norman, Century, Newcastle- on-Tyne	...	...	C	...	C
Shellard, E. Frederick, Ocean, London	...	...	C	C	C

**Fire Branch—continued.**

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Shellard, H. M. T., Comm'l. Union, Bristol	...	...	C	C	C
Shipway, Arthur A., London Assurance, Bristol	...	...	C	C	C
Short, Reginald B. L., Comm'l. Union, Exeter	...	C	C	...	C
Simon, W. G., Alliance, Newcastle-on-Tyne	C	...	C	...	C
Sims, Alfred, Western, Bristol	...	...	...	C	C
Sloan, David, London and Lancashire Fire, Glasgow	C	...	...	C	C
Smith, G. F., Alliance, Sheffield	C	...	...	C	C
Smith, L., Atlas, Newcastle-on-Tyne	...	...	C	C	C
Smith, P. H., Gresham, Manchester	...	...	C	C	C
Stables, Arthur L., Royal, Liverpool	...	...	C	C	C
Stone, G. F., Car and General, Brighton	...	...	...	...	C
Stotesbury, J. M., General Accident, London	...	...	C	C	C
Stringer, S. F., Liverpool and London and Globe, Northampton	C	C	...	...	...
Tait, William, Caledonian, Manchester	...	...	C	...	...
Taylor, E. W., Ocean, London	...	...	C	C	C
Taylor, Walter H., National General, Manchester	...	...	C	C	C
Thompson, C. N., Yorkshire, Leeds	C	C	...	C	...
Thurston, Maurice J., Sun, London	...	...	C	...	...
Turner, Herbert S., Royal, Carlisle	C	...	...	C	C
Venner, E. W., Alliance, Birmingham	C	C	...	C	...
Vincent, R. C., Western, Bristol	C	C	...	...	C
Wainwright, O. G., Royal, Carlisle	...	...	C	C	C
Wait, Alexander, Royal, Newcastle-on-Tyne	C	C	...	...	...
Wait, Charles S., Alliance, Newcastle-on-Tyne	C	..	...	C	...
Walker, Fred, Royal, Hull	C	..	...	C	C
Wall, Dudley, Ocean, London	C	...	...	C	C
Walpole, R. O. S., Alliance, Sheffield	...	...	...	...	C
West, Jno. G., North British and Mercantile, Edinburgh	...	...	...	C	C
White, H., Northern, London	...	...	C	C	C
Williams, Arthur H., Sprinkler and General, Manchester	C	...	C	...	C
Williams, E. F., State, Bristol	...	...	C	C	C
Womack, Malcolm, State, Manchester	C	...	...	C	...
Young, H. H., Royal Exchange, Sheffield	...	...	C	C	C
Young, Wallace H., Northern, London	...	...	...	C	C

## LIFE BRANCH.

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Anderson, Alex. S., Caledonian, Aberdeen	...	...	C	C	C
Apperson, Frank, Sun Life of Canada, Belfast	...	...	C	C	C
Barber, Fredk. H., North British and Mercantile, London	...	...	C	C	C
Beat, E. E., Co-operative, Manchester	...	...	C	C	C
Beebee, Richard T., Pearl, London	C	...	...	C	C
Benson, Arthur E., Star, Hull	C	...	...	C	C
Blake, C. B., Marine and General, Nottingham	...	...	C	C	C
Broderick, D. J., Pearl, London	...	...	C	C	C
Brownlee, J. W., Sun Life of Canada, Belfast	...	...	C	C	C
Burbridge, Oliver L., Royal, London	C	...	...	C	C
Carr, Fredk. James, Phoenix, Newcastle-on-Tyne	C	C	C	...	...
Carter, C., Star, Hull	...	...	C	C	C
Chapman, Eric, Sun Life, Leeds	C	C	...	C	C
Collymore, Robert, Sun Life, London	C	...	...	C	C
Cook, Albert, Refuge, Manchester	...	...	C	C	C
Cotter, W. E., Royal, Liverpool	...	...	C	C	C
Dale, Reginald, Royal, London	...	C	...	C	C
Deed, Arthur Edgar, Star, Hull	C	C	...	C	...
Dickie, D. H., Life Association of Scotland, Glasgow	...	...	C	C	C
Douglas, John, North British and Mercantile, Edinburgh	...	...	C	C	C
Fitzwilliam, George E., Sun Life, London	...	...	C	C	C
Fletcher, H. N. J., Royal, Liverpool	...	...	C	C	C
Fordyce, William Andrew, Liverpool and London and Globe, Edinburgh	C	...	...	C	C
Fryer, Victor, Co-operative, Manchester	...	...	C	C	C
Fullerton, John, Pioneer, Liverpool	...	...	C	C	C
Gee, Jno. A., Pearl, Liverpool	...	...	C	C	C
Gillespie, William D., North British and Mercantile, Edinburgh	...	...	C	C	C
Gray, R. W., City of Glasgow, Newcastle-on-Tyne	...	...	C	C	...
Green, Thomas Hy., Refuge, Leicester	C	...	C	C	...
Halliwell, J. H., Royal, Liverpool	...	...	C	C	C
Herriot, W., Century, Edinburgh	...	...	C	C	C
Hill, Guy S., Guardian, Birmingham	...	...	C	...	C



**Life Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Houseman, A. W., Royal, London ...	C	...	C	C	C
Huggan, J., English and Scottish Law, London	...	...	C	C	C
Johnston, John Stuart, Caledonian, Aberdeen	...	...	C	C	C
Kennedy, Robert, London, Edinburgh and Glasgow, London	...	...	C	C	C
Laing, Allan M., Pioneer, Liverpool	...	...	C	C	C
Leicester, John H., Pioneer, Liver- pool	...	...	C	C	C
Lilley, W., Abstainers and General, Leeds	...	...	C	C	C
Locke, A. E., Hearts of Oak, London	C	...	C	C	C
Lomas, Joseph, Co-operative, Manches- ter	...	...	C	C	C
Loney, Arthur, Royal, Hanley ...	C	C	...	C	...
Marriott, Manthorp F. L., English and Scottish Law, London	C	...	...	C	C
Matthews, S. L., Pearl, London ...	...	...	C	C	C
May, F. W. L., Scottish Widows, Belfast	...	...	C	...	C
Morgan, Ernest L., Alliance, London	C	C	...	C	C
Pascoe, E. A., United Kingdom Tem- perance, Cardiff	...	...	C	C	C
Percy, Horace, Mutual Life of New York, Liverpool	...	...	C	C	C
Riordan, James K., Royal, Liverpool	C	...	...	C	C
Sawer, Thomas, Britannic, Hastings ...	...	...	C	C	C
Smith, D. C. W., Sun Life, Ipswich ...	...	...	C	C	C
Sutherland, Alfred J., Scottish Pro- vident, Aberdeen	...	...	C	...	C
Thomas, P. Norman, Comm'l. Union, Exeter	...	...	C	C	C
Tween, T. C., Comm'l. Union, London	...	...	C	C	C
Tyson, Stanley H., Royal, Liverpool	C	...	...	C	C
Urquhart, Alastair, Scottish Widows, Manchester	C	...	...	C	C
Walker, E. B., London and Lanca- shire Life, London	...	...	C	C	C
Wands, Robert D., Royal, Liverpool	...	...	C	C	C
Watson, S. Cook, Edinburgh Life, Newcastle-on-Tyne	...	...	C	C	C

**Life Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Weedon, Edgar, Royal, Maidstone ...	...	...	C	C	C
White, J. A., English and Scottish Law, Belfast	...	...	C	C	C
Wilson, Charter, Scottish Widows, Belfast	C	...	...	C	C
Wilson, H. Wilfrid, Royal, Liverpool	...	...	C	C	C
Wilson, Thomas H., London Assurance, Belfast	C	...	...	C	C
Wood, F. L., Sun Life, London ...	C	...	...	C	C
Wright, C. Henri, Co-operative, Manchester	...	...	C	C	C

**ACCIDENT BRANCH.**

Abrey, C. G., London Guarantee and Accident, London	...	...	C	C	C
Akeroyd, Fred, Car and General, Manchester	...	...	C	C	C
Blackstock, William Witt, Broker, Manchester ...	...	...	C	C	C
Baden, Lionel, Central, London ...	...	...	C	C	C
Bailey, A. B., Royal Exchange, Birmingham	C	...	...	C	C
Belford, James Charles, Royal, Newcastle-on-Tyne	...	...	C	...	...
Bland, W. E., Phoenix, London ...	...	...	C	...	...
Bloore, Edward H., Pearl, London ...	...	...	C	C	C
Brause, A., Car and General, London	...	...	C	C	C
Brooking, H. F., Yorkshire Coal Owners, Sheffield	...	...	C	C	C
Bryant, F. W., Phoenix, London ...	C	...	...	C	C
Butler, H. H., Liverpool and London and Globe, London	...	...	C	C	C
Butler, P. N., Car and General, Leeds	...	...	C	C	C
Cadle, Stanley, Car and General, London	...	...	C	C	C
Carr, Frederick James, Phoenix, Newcastle-on-Tyne	C	C	C	...	...
Cartwright, Frank, Alliance, Manchester	...	...	C	C	C
Casewell, V. J., Alliance, Shrewsbury	C	...	...	C	C
Cawson, Frederick A., British Equitable, Liverpool	...	...	C	C	C
Dartnall, R. J., General Accident, London	...	...	C	C	C
Drury, Harry, Car and General, Leeds	...	...	C	C	C
Emery, K. D., Ocean, London ...	...	...	...	...	C

**Accident Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Frampton, C. F. W. V., Law Accident, Northampton	...	...	...	C	C
Fraser, C. Morrison, London and Lancashire Life, Glasgow	...	...	C	C	C
Gandy, R. C., State, Liverpool	...	...	C	C	C
Gascoyne, Francis P., Sun Life of Canada, Birmingham	C	...	...	C	C
Gay, L. J. A., Ocean, Birmingham	...	...	C	C	C
Gildea, C. E., Yorkshire, Dublin	...	...	C	...	...
Giles, Wilfred B., Alliance, Bristol	...	C	...	C	C
Giller, Cyril, Midland and Textile, Liverpool	...	...	C	C	C
Goldsworthy, Norman, Railway Passengers, Cardiff	C	...	C	C	C
Goodman, E. G., British Crown, London	C	...	...	C	C
Goodway, H. W., Fine Art and General, London	...	...	C	C	C
Hamilton, A., Royal, Glasgow	C	...	...	C	C
Hawes, Cecil L., London Guarantee and Accident, London	...	...	C	...	...
Hicks, Arthur E., Fine Art and General, London	...	...	C	C	C
Hill, Guy S., Guardian, Birmingham	...	...	C	...	...
Hodge, W., General Accident, Perth	...	...	C	C	C
Hollingsworth, E., Guardian, London	...	...	C	C	C
Hood, John, Law Accident, London	C	...	...	C	C
Horner, A. Lawrence, Royal, Sheffield	C	C	...	C	...
Howard, Wilfred, Midland and Textile, London	C	...	...	C	C
Howlett, Lynton Lort, Royal, Birmingham	...	...	C	...	...
Jarvis, Charles E., Ocean, Nottingham	...	...	C	C	C
Jewell, Frank E., Scottish Union and National, London	...	...	C	C	C
Jones, Robert J., Commercial Union, Manchester	...	...	C	...	...
Lea, William, Commercial Union, Manchester	...	...	...	C	C
Leighton, T. R., Ocean, Hull	C	...	...	C	C
Leslie, G. M., Scottish Union and National, Dublin	...	C	C	C	C
Lightbody, C., General Accident, Perth	...	...	C	C	C
M'Clure, Joseph, Commercial Union, Belfast	C	...	...	C	C
Macdonald, D. W., Ocean, Leicester	...	...	C	C	C

**Accident Branch—continued.**

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Macdonald, R., Ocean, London ...	...	...	C	C	C
M'Farlane, J. Y., Commercial Union, Belfast	...	...	C	C	C
MacGregor, George M., General Accident, London	C	C	...	C	C
Marriott, Manthorp F. L., English and Scottish Law, London	C	...	...	C	C
Mason, R. N. R., Ocean, Sheffield ...	C	...	...	C	C
Metcalfe, Percy W., Car and General, Leeds	...	C	C	C	...
Morton, Edwin H., Sun, London ..	...	...	C	...	...
Owen, T. L., Alliance, Shrewsbury ...	...	...	C	C	C
Owen, W. E., London and Lancashire Life, Liverpool	C	...	C	...	C
Parker, Alexander D., Royal, Belfast	...	...	C	C	C
Rayner, Cyril Hood, Alliance, London	C	C	C	C	C
Rodger, J., General Accident, Perth	...	...	C	C	C
Rule, Herbert G., General Accident, Sheffield	C	...	..	C	C
Sharman, J. W., Commercial Union, London	...	...	C	...	C
Sheaves, Harold E., Railway Passengers, London	...	...	C	C	C
Small, Thomas, British Crown, Glasgow	C	...	...	C	C
Smith, J. W., Midland and Textile, Birmingham	...	C	...	C	C
Smith, P. H., Gresham, Manchester ...	...	...	C	C	C
Stansfield, Frederick William, Law Accident, Liverpool	...	...	C	C	C
Stephenson, A. C. R., Ocean, New- castle-on-Tyne	C	...	...	...	...
Stewart, G. H., Car and General, Dundee	...	...	C	C	C
Tait, William, Caledonian, Manchester	...	...	C	...	...
Thomas, John, Jun., Ocean, Newcastle- on-Tyne	C	...	...	...	...
Thomas, W. E., Royal, Dublin ...	...	...	C	C	C
Tite, John S., Alliance, Birmingham	C	...	...	...	...
Tolfree, J. W., London and Lancashire Fire, Liverpool	C	C	...	...	C
Travis, W. F., Ocean, Sheffield ...	C	...	...	...	C
Walker, Vernon D., General Accident, Dundee	C	C	...	C	...
Watson, F. B., Scottish Union and National, Dublin	...	...	...	C	C

**Accident Branch**—*continued.*

	Chemistry.	Electricity.	Book-keeping.	Mathematics.	Geography.
Weeks, A. J., General Accident, Bristol	...	...	C	C	C
Wilkinson, E. M., Alliance, Dublin ...	C	...	...	C	C
Wilson, Thomas H., London Assurance, Belfast	C	...	...	C	C
Yates, T., Commercial Union, Man- chester	C	...	...	C	C



*The following Candidates (in addition to those mentioned in previous Reports) have passed all the subjects comprised in*

### **FIRE BRANCH.**

#### **PARTS I., II., AND III. :—**

Alger, Henry Ernest Hill, Phoenix, London.  
 Armstrong, John C., Fine Art & General, London.  
 Bibby, James Victor, Alliance, Newcastle-on-Tyne.  
 Blande, Arthur Frederick William, Union, London.  
 Clarke, Arthur Charles, Atlas, London.  
 Crowther, Vincent Oswald, Royal, Leeds.  
 Dawson, Allan, State, Liverpool.  
 Deane, Norman Benjamin, Ocean, London.  
 Dott, John Maclure, Royal, Liverpool.  
 Evans, Ernest, Westminster, London.  
 Finch, George Frederick, Norwich Union, Norwich.  
 Hendry, Charles M., Royal, Aberdeen.  
 Hitch, Edward Gordon, State, Liverpool.  
 Manton, Edwin Grenville, London Assurance, London.  
 Matthews, Joseph Henry, Alliance, London.  
 Paine, Ernest William, Liverpool & London & Globe, Northampton.  
 Penney, William, Sun, Manchester.  
 Richards, George L. Wallace, Fine Art & General, London.  
 Robinson, Reginald Victor, Alliance, Birmingham.  
 Sheppard, Harry, Royal, Liverpool.  
 Simpkin, Harry, Royal Exchange, Bristol.  
 Smith, Arnold George Frederick, Liverpool & London & Globe,  
     Nottingham.  
 Smith, Harrison Churchill, Liverpool & London & Globe, Stoke-  
     on-Trent.  
 Thomas, Harold Allpress, Phoenix, London.  
 Turner, Clifford, County, Leeds.  
 Wells, Harold R., Northern, Birmingham.  
 Williams, Roland George, Ecclesiastical, London.  
 Yerbury, Francis H. B., Phoenix, Bristol.

#### **PARTS I. AND II. :—**

Ambler, John Clifford, Northern, Manchester.  
 Atkin, George Reginald, Yorkshire, Sheffield.  
 Baidon, Christopher Nevile, Royal, Liverpool.  
 Banfield, George Edwin, Royal, Liverpool.  
 Bengier, Alfred H., Broker, London.  
 Bewsey, Walter Charles, Phoenix, London.  
 Bond, William Charles, London & Lancashire Fire, Liverpool.  
 Bowden, Wilfrid Bernard, London & Lancashire Fire, Liverpool.  
 Brand, Herbert Cecil, Law Fire, London.  
 Brown, Robert Drummond, Liverpool & London & Globe, Liverpool.  
 Burton, Harold John (late Commercial Union, Birmingham), New  
     Zealand.  
 Burton, William Harry, British Equitable, London.  
 Busbridge, Herbert W., Royal, Maidstone.  
 Campbell, Nurrey G., Century, Edinburgh.  
 Caudle, Charles Henry, Ocean, Reading.  
 Challener, Arthur C., Liverpool & London & Globe, Bristol.  
 Clapham, James Francis, Royal Exchange, Manchester.

Clark, John Devin, Phoenix. Edinburgh.  
Clarkson, Charles Reginald Walton, Norwich Union, Leicester.  
Clarkson, William Leo Walton, Essex & Suffolk, Leicester.  
Claydon, Frederick Halls, County, London.  
Clydesdale, Robert, Norwich Union, Edinburgh.  
Cobb, John Frederick, Royal, Manchester.  
Cooper, William Livingstone, Scottish Union & National, Edinburgh.  
Corrigan, Thomas H., Sun, Dublin.  
Cottle, Francis Joseph, London & Lancashire Fire, Liverpool.  
Coysh, Edwin, Commercial Union, Newcastle-on-Tyne.  
Danicell, Eric Herbert, Ocean, London.  
Dewar, Robert, Phoenix, Glasgow  
Dixon, Albert E., Norwich Union, Birmingham.  
Dowler, Frank, Fine Art & General, Birmingham.  
Dupuy, John, Royal London, London.  
Ewart, John, North British & Mercantile, Edinburgh.  
Eyre, Richard P. H., Alliance, London.  
Falconer, Reginald James, Union, Southampton.  
Fell, Henry William, State, Liverpool.  
Ferguson, Edward Brown, London & Lancashire Fire, Glasgow.  
Forrest, Percy H., Commercial Union, Nottingham.  
Foweraker, Thomas R., Norwich Union, Bristol.  
Garry, Kenneth, Alliance, Nottingham.  
Gedye, Edward L., Alliance, Bristol.  
George, Leonard Henry, Alliance, London.  
Gore, Harold Thomas, Royal, London.  
Harrison, George William, Commercial Union, Manchester.  
Hastings, Harry, West of Scotland, Edinburgh.  
Head, George Oliver, Northern, Bristol.  
Hill, Malcolm G., Scottish Union & National, Birmingham.  
Hillen, Kenneth John, British Crown, London.  
Hirst, William Dobson, North British & Mercantile, Leeds.  
Hodgkinson, James Percival, Commercial Union, Nottingham.  
Hollingshead, Wilfred H., Norwich Union, Leicester.  
Horspole, Arthur William, Fine Art & General, Hull.  
Hughes, Owen John, Gresham, Cardiff.  
Humphris, John H., London Assurance, Bristol.  
Jackson, Arthur Gordon, Legal, London.  
Jackson, Robert A., Alliance, Birmingham.  
Jennings-Clark, Harry T., Welsh, London.  
Johnson, Clarence Samuel, State, London.  
Johnson, William Trevor, Royal, Birmingham.  
Johnston, George Eric, Royal, Cardiff.  
Keenan, Arthur Stanley R., London & Lancashire Fire, London.  
Kepple, Stanley A. F., Phoenix, Bristol.  
King, Hedley Gordon, Royal, Maidstone.  
Lacey, Harold Neal, Norwich Union, Leicester.  
Leech, Frank, Phoenix, Liverpool.  
Lewis, Arthur George, Central, Cardiff.  
Lindsay, John M., Liverpool & London & Globe, Dundee.  
Lythgoe, Jeffrey W., Alliance, Birmingham.  
M'Millan, Sidney, Royal, Manchester.  
M'Owan, Douglas, Alliance, London.  
Marriott, Manthorp F. L., English & Scottish Law, London.  
Marsden, Arthur Ellis, Liverpool & London & Globe, Liverpool.  
Millar, William Arthur, North British & Mercantile, Edinburgh.  
Mills, George Henry, Liverpool & London & Globe, Liverpool.  
Moffat, Edward, Commercial Union, Leeds.  
Mott, Albert William, Yorkshire, London.  
Newbery, Harold A., Law Union & Rock, Birmingham.  
Norfolk, John Percy, Commercial Union, Hull.

Payne, Wallace Edwin, Sun, Bristol.  
 Peck, Harold, J., Commercial Union, Bristol.  
 Pinkerton, Andrew, Phoenix, Glasgow.  
 Porter, George F. L., Jun., Sun, Dublin.  
 Radcliffe, Charles Edward, Jun., Royal, Liverpool.  
 Randell, Gilbert H., London & Lancashire Fire, Bristol.  
 Ransome, Harold G., Norwich Union, Norwich.  
 Reade, Leonard Edwin, Royal, Lincoln.  
 Reid, Alexander, Liverpool & London & Globe, Liverpool.  
 Richards, Fitzgerald Delme, Alliance, Liverpool.  
 Richards, George Percy, London & Lancashire Life, Manchester.  
 Richardson, William John, Northern, London.  
 Roberts, William, Scottish Union & National, Manchester.  
 Robinson, Harold, Commercial Union, Leeds.  
 Rutherford, Harold, Commercial Union, Birmingham.  
 Schofield, John E., Phoenix, Birmingham.  
 Scholefield, Herbert W., Royal, Liverpool.  
 Shellard, H. M. T., Commercial Union, Bristol.  
 Skaife, Charles Wilfrid, Royal, Liverpool.  
 Smith, James Douglas, Atlas, Glasgow.  
 Spaull, Frederick John, Consolidated, London.  
 Spiuk, William Stanley, Royal, Hull.  
 Stacey, Maurice, Norwich Union, London.  
 Stenning, Harold Gordon, Alliance, London.  
 Stocks, Ernest A., Alliance, Birmingham.  
 Sutherland, James W., North British & Mercantile, Edinburgh.  
 Swornsbourne, William F. St. J., Car & General, London.  
 Taylor, Percival Charles Goodiff, Alliance, London.  
 Taylor, William Anthony, Royal, Lincoln.  
 Thomson, Alexander Forbes, Royal, Liverpool.  
 Thwaites, Robert, Royal Exchange, Newcastle-on-Tyne.  
 Walmsley, Russell, Royal, Manchester.  
 Watson, Joseph Purdie, Liverpool & London & Globe, Edinburgh.  
 Waud, Christopher William Henry P., Royal, London.  
 Westlake, Hubert L., Yorkshire, Newcastle-on-Tyne.  
 Weston, Ernest, Alliance, Shrewsbury.  
 White, Edwin Thexton, Yorkshire, Liverpool.  
 Wilde, Charles, Ocean, Manchester.  
 Williams, Edgar J., Scottish Union & National, Birmingham.  
 Williams, James L., Northern, Aberdeen.  
 Williams, Leigh Roslin, Royal Exchange, London.  
 Wolfenden, Percy, General Accident, Manchester.  
 Wootton, John Norman, Sun, Leeds.  
 Wright, Frank Edward, Royal, Liverpool.

**PART I:—**

Adams, Jack Raleigh, Norwich Union, Leicester.  
 Alderdice, Richard S., Hand-in-Hand, Belfast.  
 Alexander, Hugh C., Northern, Dundee.  
 Anderson, James, Commercial Union, Belfast.  
 Atkinson, Reginald Guy, Royal, London.  
 Balding, Charles Dennes, London Guarantee & Accident, Reading.  
 Bargery, George Herbert, Royal, Liverpool.  
 Barnes, Francis H., Union, London.  
 Barrett, Leonard, Scottish Union & National, Leeds.  
 Beacroft, William, Legal, Nottingham.  
 Beckingham, Frank, Ocean, Liverpool.  
 Belford, James Charles, Royal, Newcastle-on-Tyne.  
 Berry, Bernard, Northern, London.  
 Bishop, William Dent, Law Fire, London.  
 Blake, Frederick, North British & Mercantile, Doncaster.

Bower, John Alfred, Union, Bradford.  
Box, Henry E., State, Bristol.  
Brearley, Cyril Osmond, Union, Leeds.  
Briant, Bruce Edgar D., Royal Exchange, Brighton.  
Brown, Gordon, London Assurance, Glasgow.  
Bryant, Arthur B. R., Employers' Liability, London.  
Buckton, W., Commercial Union, Newcastle-on-Tyne.  
Bullock, Leslie G., Commercial Union, London.  
Burgess, William, Caledonian, Aberdeen.  
Burgoyne, Albert H., Star, Bristol.  
Cadenhead, William G., Advocate's Clerk, Aberdeen.  
Carden, Edward Charles T., Alliance, London.  
Carroll, Anthony P., Employers' Liability, London.  
Carson, Bertram D., Scottish Union & National, Birmingham.  
Chapman, Oswald Arthur, Sun, Leeds.  
Chapman, William Rowland, State, Newcastle-on-Tyne.  
Cinnamond, Frederick C., Royal, Belfast.  
Clark, F. Gordon, Commercial Union, Birmingham.  
Clarke, J. W., Fine Art & General, Leicester.  
Cloud, Stanley William, Scottish Union & National, London.  
Cocke, Arthur John, Union, London.  
Cole, John, T., Royal Exchange, London.  
Coles, James William, Commercial Union, Exeter.  
Cooke, Leslie C., Atlas, Birmingham.  
Cooper, Ernest, Liverpool & London & Globe, London.  
Cooper, Henry Alfred, London Assurance, London.  
Cottam, George Alexander, Royal, Liverpool.  
Couch, Harold J., Commercial Union, Birmingham.  
Cowlam, Frank, Law Union & Rock, Leeds.  
Craig, Douglas N., King, Glasgow.  
Crawshaw, Stephen K., Alliance, Sheffield.  
Crooks, E. E., Law Union & Rock, Dundee.  
Cross, Clarence, Ecclesiastical, London.  
Cuming, John H., National Union, Constantinople.  
Cureton, Herbert R., Scottish Union & National, Birmingham.  
Currie, Douglas Hendrie, Northern, London.  
David, C. A., London & Lancashire Fire, Cardiff.  
de Jastrzebski, Hubert S. S., Central, London.  
Dilley, John Robert, British Crown, London.  
Dixon, William, Northern Equitable, Newcastle-on-Tyne.  
Dudley, Arthur J., Abstainers & General, Birmingham.  
Dyer, James Basil, County, London.  
Emery, Hubert Sydney, Yorkshire, York.  
Fawcett, Sidney Hunter, British Crown, Newcastle-on-Tyne.  
Fisher, Arthur, Legal, Newcastle-on-Tyne.  
Fleming, John Ronald, British Crown, London.  
Frost, Leonard A., Essex & Suffolk, Cambridge.  
Gardner, Robert Lindsay, General Accident, Norwich.  
Gibson, Henry Eric, Royal, Lincoln.  
Gibson, William Laird, Royal, Edinburgh.  
Gilchrist, Archibald, British Crown, Glasgow.  
Giles, Benjamin, Phoenix, Newcastle-on-Tyne.  
Gill, Henry Andrew, Alliance, London.  
Goddard, G. C., Liverpool & London & Globe, London.  
Gosling, Frederick P., Central, Birmingham.  
Goodwin, John H., Union, Bristol.  
Graham, Lewis, North British & Mercantile, Edinburgh.  
Grant, Bernard S. H., Royal, Maidstone.  
Grant, Frank, Fine Art & General, Leicester.  
Gray, Cecil Fred, Midland & Textile, London.  
Gray, Herbert, Royal Exchange, Newcastle-on-Tyne.

Greenwood, Norman, Royal, Manchester.  
 Hall, C. G., Sun, Cardiff.  
 Hall, Frank, Jun., Commercial Union, Hull.  
 Halliday, John Creighton, Scottish Union & National, Edinburgh.  
 Hammond, Leslie Douglas, Sun, Leeds.  
 Harris, J. L., Commercial Union, Leeds.  
 Harris, W. H., Sun, Plymouth.  
 Harris, William Henry, Yorkshire, Cardiff.  
 Hartley, Morris Gilbert, Fine Art & General, Glasgow.  
 Harvie, Alexander Watson, Essex & Suffolk, Glasgow.  
 Harvey, Daniel, Century, Glasgow.  
 Haughton, Walter R., British Law, London.  
 Hawkswell, Ernest G., Yorkshire, Sheffield.  
 Hay, James A., Liverpool & London & Globe, Liverpool.  
 Heaton, William Leonard, Yorkshire, York.  
 Henderson, Alfred George, Abstainers & General, Belfast.  
 Henshall, Donald Edward, Sun, London.  
 Hibburd, Edward E., Guardian, London.  
 Higginbottom, George, Law Union and Rock, Manchester.  
 High, A. P., Royal London, London.  
 Higham, Herbert G., Law Union and Rock, London.  
 Hill, Lewis John, Midland and Textile, London.  
 Hill, W. H. S., Midland and Textile, Birmingham.  
 Hind, Norman E., Royal, Belfast.  
 Hodge, George, London Guarantee and Accident, Maidstone.  
 Holdsworth, Edgar B., Royal, Hull.  
 Hopkins, Leslie W., Royal London Auxiliary, Cardiff.  
 Howarth, Ernest, Employers' Liability, Manchester.  
 Howitt, V. H., State, Newcastle-on-Tyne.  
 Hughes, William E., Atlas, Belfast.  
 Humphris, Eric R., Alliance, Bristol.  
 Hunter, William Blackburn, Yorkshire, Leeds.  
 Hutchings, James Giles, Commercial Union, Exeter.  
 Jackson, Vernon Norbury, Sun, Manchester.  
 Jefferson, H., Royal, Belfast.  
 Jenkins, Donald T., Sun, Bristol.  
 Johnson, Aubrey L., Central, Birmingham.  
 Johnson, Harry James, Commercial Union, Dublin.  
 Johnston, Leslie James, Commercial Union, Belfast.  
 Jones, Thomas Osmond, Commercial Union, Liverpool.  
 Keable, Arthur, Ocean, London.  
 Kelly, C. Gratton, Alliance, Dublin.  
 Kelly, William Pearson, Liverpool and London and Globe, Liverpool.  
 Kelsall, Vernon Downs, Fine Art and General, Manchester.  
 Kendrick, Hugh Cumyngs, Ocean, Hull.  
 Kent, Stanley H., Alliance, Newcastle-on-Tyne.  
 Kluegel, H. Reginald, Alliance, London.  
 Lant, George Dudley, General Accident, Sheffield.  
 Lawson, D. B., National of Great Britain, Manchester.  
 Leask, William, Century, Edinburgh.  
 Leigh, Ernest, State, Manchester.  
 Leighton, Harry, A. W. Bain & Sons, Leeds.  
 Lewis, Frederick H., Royal, Belfast.  
 Lewis, William Thomas, Ocean, Cardiff.  
 Lind, James, Norwich Union, Glasgow.  
 Lines, Cecil, Yorkshire, Sheffield.  
 Lister, Edward I., Central, Leeds.  
 Lunt, Arthur T., State, Liverpool.  
 M'Arthur, Charles, Guardian, Edinburgh.  
 Macarthur, George, Royal, Glasgow.  
 M'Daniel, J. V., Atlas, Dublin.



M'Kay, Donald Anderson, Century, Edinburgh.  
Mackay, H. Neil, Royal Exchange, London.  
M'Kenzie, Charles, Caledonian, Edinburgh.  
Mackenzie, James Brown, Alliance, Edinburgh.  
Mackenzie, Murray M., Liverpool and London and Globe, Glasgow.  
Mackrill, John Farmer, Royal, Grimsby.  
M'Lagan, John R., Norwich Union, Glasgow.  
MacLeod, John, Yorkshire, York.  
M'Leod, William, Jun., West of Scotland, Glasgow.  
Manson, David Alexander, Century, Edinburgh.  
Marcinkoski, Charles Felix, Northern, Edinburgh.  
Masters, Arthur Charles, Alliance, Manchester.  
Measures, Albert M., Commercial Union, Birmingham.  
Milligan, Charles E., Commercial Union, Belfast.  
Monkman, Leonard, Yorkshire, York.  
Montgomery, A. C., Caledonian, Belfast.  
Morton, Sydney, National of Great Britain, Manchester.  
Mossley, Rene, British Crown, London.  
Murphy, John White, London and Lancashire Life, Belfast.  
Musker, Joseph Walter, Liverpool and London and Globe, Liverpool.  
Newman, Harold Winton, Northern, London.  
Noble, Thomas Dewar, Dominion, Edinburgh.  
Nunn, Gordon S., Alliance, Birmingham.  
O'Kane, Edward G., Patriotic, Belfast.  
Oliver, James G., Royal Exchange, Newcastle-on-Tyne.  
Ovenstone, Robert S., Atlas, Glasgow.  
Palmer, W., Royal, Belfast.  
Parker, Thomas R., Royal Exchange, Dublin.  
Parkhill, Ernest I., Royal, Belfast.  
Paterson, Robert Frank, Sun, Manchester.  
Pearson, A. H., Royal London Auxiliary, London.  
Pearson, Clifford, Central, Leeds.  
Pennycook, Ernest H., Northern, Edinburgh.  
Phillips, Edmund Norman, Royal, Leeds.  
Phillips, Harold, Alliance, Sheffield.  
Philpot, Sidney Herbert, Fine Art and General, London.  
Pike, Herbert Twyneham, London Guarantee and Accident, London.  
Pope, Howard J., Royal Exchange, Bristol.  
Powell, Edgar Knox, Guardian, London.  
Poynton, Charles Edward, Western, Manchester.  
Pullein, Thomas H., Yorkshire, Leeds.  
Pulton, Samuel D., Sun, Plymouth.  
Quinlan, James Leonard, Liverpool and London and Globe, Liverpool.  
Radmall, Frederick Henry, Guardian, Nottingham.  
Rag, Thomas, Sun, London.  
Randall, Harry L., Commercial Union, Exeter.  
Rankin, Robert, Fine Art and General, Glasgow.  
Raper, Percy S., North British and Mercantile, Leeds.  
Richardson, Duncan S. P., London Assurance, Bristol.  
Richardson, Rowland, Yorkshire, Leeds.  
Roberts, R. Jesse, Commercial Union, Newcastle-on-Tyne.  
Robertson, R. A., Northern, London.  
Rose, Thomas, North British and Mercantile, Edinburgh.  
Kyle, Ernest, Northern, Newcastle-on-Tyne.  
Salmons, Harry, Royal, Halifax.  
Sandison, Albert W., Century, Edinburgh.  
Scriven, W. B., Law Fire, London.  
Sharp, Walter James, London and Lancashire Fire, Dundee.  
Sharpe, Edgar Frederick, Fine Art and General, Leicester.  
Shellard, E. Fredk., Ocean, London.  
Shipway, Arthur A., London Assurance, Bristol.

Short, Reginald B. L., Commercial Union, Exeter.  
 Simon, W. G., Alliance, Newcastle-on-Tyne.  
 Simpson, Honeyman A., County Fire, Glasgow.  
 Sims, Alfred, Western of Toronto, Bristol.  
 Sloan, David, London and Lancashire Fire, Glasgow.  
 Smallcombe, Henry R., Legal, Bristol.  
 Smith, Leigh, Atlas, Newcastle-on-Tyne.  
 Smith, P. H., Gresham, Manchester.  
 Smith, Stanley Fenton, Alliance, Sheffield.  
 Smith, Thomas William, National of Great Britain, Newcastle-on-Tyne.  
 Stables, Arthur L., Royal, Liverpool.  
 Stearns, Eric Gordon, Sun, London.  
 Stock, Cyril B., British Law, Bristol.  
 Stone, George Frederick, Car and General, Brighton.  
 Stotesbury, J. M., General Accident, London.  
 Taylor, E. W., Ocean, London.  
 Taylor, Leslie Francis, Alliance, London.  
 Taylor, Walter Herbert, National General, Manchester.  
 Thompson, Charles Norman, Yorkshire, Leeds.  
 Thomson, Thomas Alexander, Scottish Union and National, Edinburgh.  
 Thurston, Maurice J., Sun, London.  
 Turner, Herbert S., Royal, Carlisle.  
 Unwin, Edwin Booth, Alliance, Sheffield.  
 Vaughan, Arthur Lloyd, Yorkshire, Leeds.  
 Venner, E. W., Alliance, Birmingham.  
 Vincent, Robert C., Western, Bristol.  
 Waddington, Hubert, Western Manchester.  
 Wainwright, Osmund G., Royal, Carlisle.  
 Wait, Alexander, Royal, Newcastle-on-Tyne.  
 Wait, Charles S., Alliance, Newcastle-on-Tyne.  
 Wakefield, Laurence Edwin, London and Lancashire Life, Liverpool.  
 Walker, Fred, Royal, Hull.  
 Walker, James Hollands, North British and Mercantile, Edinburgh.  
 Wall, Dudley, Ocean, London.  
 Walpole, Ronald Orford S., Alliance, Sheffield.  
 Wands, Robert Douglas, Royal, Liverpool.  
 Watson, Alexander Brydon, Liverpool and London and Globe, Edinburgh.  
 Watson, William G. T., British Equitable, Bristol.  
 Webb, Paul Frederick, British Crown, London.  
 Westmore, Alexander Wemyss, Royal, Liverpool.  
 White, Harold, Northern, London.  
 Wilkinson, Geoffrey William, Midland and Textile, London.  
 Williams, Arthur H., Sprinkler and General, Manchester.  
 Williams, E. F., State, Bristol.  
 Wilson, Arthur Clarke, Commercial Union, Nottingham.  
 Wrigley, John Harrop, Hand-in Hand, Manchester.  
 Young, Harold Henry, Royal Exchange, Sheffield.

### **LIFE BRANCH.**

#### **PARTS I., II., AND III. :—**

Atfield, Herbert Stanley, Royal, London.  
 Fletcher, H. J. N., Royal, Liverpool.  
 Fullerton, John, Pioneer, Liverpool.  
 Laing, Allan M., Pioneer, Liverpool.  
 Percy, Horace, Mutual Life of New York, Liverpool.  
 Wands, Robert Douglas, Royal, Liverpool.

PARTS I. AND II. :—

Baker, Sydney Harry, Sun Life, London.  
Brownlee, J. W., Sun Life of Canada, Belfast.  
Cotter, Walter E., Royal, Liverpool.  
Gee, John Alfred, Pearl, Liverpool.  
Robertson, James, Pioneer, Liverpool.

PART I. :—

Aaron, Benjamin, County, Leeds.  
Adams, William, Royal, Dundee.  
Anderson, Alexander S., Caledonian, Aberdeen.  
Apperson, Frank, Sun Life of Canada, Belfast.  
Banham, John Warren, Alliance, London.  
Barber, Frederick H., North British and Mercantile, London.  
Beat, E. E., Co-operative, Manchester.  
Beebee, Richard T., Pearl, London.  
Benson, Arthur E., Star, Hull.  
Blake, Cecil B., Marine and General, Nottingham.  
Bloore, Edward Harry, Pearl, London.  
Broderick, Daniel J., Pearl, London.  
Bunbridge, Oliver L., Royal, London.  
Carr, Frederick James, Phoenix, Newcastle-on-Tyne.  
Carter, C., Star, Hull.  
Chapman, Eric, Sun Life, Leeds.  
Clarke, Firstbrook, Scottish Widows, Birmingham.  
Collymore, Robert, Sun Life, London.  
Cook, Albert, Refuge, Manchester.  
Dale, Reginald, Royal, London.  
Davidson, William S., Scottish Amicable, Belfast.  
Davies, Thomas William, Edinburgh Life, Cardiff.  
Deed, Arthur Edgar, Star, Hull.  
Dickie, D. H., Life Association of Scotland, Glasgow.  
Douglas, John, North British and Mercantile, Edinburgh.  
Eastwood, George Herbert, Prudential, Leeds.  
Fitzwilliam, George E., Sun Life, London.  
Fordyce, William Andrew, Liverpool and London and Globe, Edinburgh.  
Fryer, Victor, Co-operative, Manchester.  
Gardner, R. P., Alliance, Edinburgh.  
Gillespie, William D., North British and Mercantile, Edinburgh.  
Green, Thomas Henry, Refuge, Leicester.  
Halliwell, J. H., Royal, Liverpool.  
Harrison, George, Pioneer, Liverpool.  
Herriot, W., Century, Edinburgh.  
Houseman, A. W., Royal, London.  
Huggan, J., English and Scottish Law, London.  
Johnston, John Stuart, Caledonian, Aberdeen.  
Jones, Edward Stanley, Union, Bristol.  
Kelly, Cecil G., Alliance, Dublin.  
Kennedy, Robert, London, Edinburgh and Glasgow, London.  
Lees, Egbert A. A., Scottish Widows, Manchester.  
Leicester, John Henry, Pioneer, Liverpool.  
Lilley, W., Abstainers and General, Leeds.  
Locke, Alfred Edward, Hearts of Oak, London.  
Lomas, Joseph, Co-operative, Manchester.  
M'Lean, Walter, Yorkshire, York.  
Marriott, Manthorp F. L., English and Scottish Law, London.  
Matthews, Sydney Legh, Pearl, London.  
May, F. W. L., Scottish Widows, Belfast.  
Moore, John, Scottish Amicable, Glasgow.  
Morgan, Ernest L., Alliance, London.

Parker, Leonard, Norwich Union Life, Leicester.  
 Pascoe, E. A., United Kingdom Temperance, Cardiff.  
 Penrose, Donald M., Alliance, London.  
 Redfern, Joseph Sidney, Abstainers and General, Birmingham.  
 Riordan, James K., Royal, Liverpool.  
 Sawyer, Thomas, Britannic, Hastings.  
 Smith, D. C. W., Sun Life, Ipswich.  
 Thomas, P. Norman, Commercial Union, Exeter.  
 Toms, Stanley William, Commercial Union, Belfast.  
 Turnbull, James Binnie, Century, Edinburgh.  
 Tween, T. C., Commercial Union, London.  
 Tyson, Stanley H., London Assurance, Belfast.  
 Urquhart, Alastair, Scottish Widows, Manchester.  
 Walker, Ernest B., London and Lancashire Life, London.  
 Watson, S. Cook, Edinburgh Life, London.  
 Weedon, Charles Harold, Sun Life, London.  
 Weedon, Edgar, Royal, Maidstone.  
 White, J. A., English and Scottish Law, Belfast.  
 Wills, Arnold Bagehot, Broker, London.  
 Wilson, Charter, Scottish Widows, Belfast.  
 Wilson, H. Wilfrid, Royal, Liverpool.  
 Wilson, Thomas H., London Assurance, Belfast.  
 Wood, F. L., Sun Life, London.  
 Wright, C. Henri, Co-operative, Manchester.

### **ACCIDENT BRANCH.**

#### **PARTS I., II., AND III. :—**

Akeroyd, Fred, Car and General, Manchester.  
 Brown, Charles Royden, Law Fire, London.  
 Davies, Edward Walter, Law Fire, London.  
 Gildea, Charles Edward, Yorkshire, Dublin.  
 Howlett, Lynton Lort, Royal, Birmingham.  
 Keely, Charles William, Commercial Union, Dublin.  
 Newham, Frederic J., Commercial Union, Birmingham.  
 Wheeler, Edgar, Caledonian, London.

#### **PARTS I. AND II. :—**

Austin, George Elliot, Alliance, Birmingham.  
 Beer, Alexander Keith, Ocean, London.  
 Boston, George T. Hiles, London and Lancashire Fire, Liverpool.  
 Bowie, David D., Midland and Textile, London.  
 Brazil, Walter, National General, London.  
 Browne, Everard A., Norwich Union, Norwich.  
 Burton, John M., Liverpool and London and Globe, Liverpool.  
 Campbell, John, Scottish Union and National, Edinburgh.  
 Champ, Frederick Henry, Car and General, London.  
 Clough, George Alwyn, Essex and Suffolk, Newcastle-on-Tyne.  
 Copson, John, Central, Birmingham.  
 Grimble, Barnard, Norwich Union, Norwich.  
 Gummer, Fred, Commercial Union, Cardiff.  
 Gwilt, Richard John, Car and General, London.  
 Harrison, Alfred E., Car and General, London.  
 Harrison, Lindley, Royal, Liverpool.  
 Hicks, Arthur Ernest, Fine Art and General, London.  
 Jarvis, Charles Edward, Ocean, Nottingham.  
 Jenkins, Albert Moss, Car and General, Birmingham.  
 Leach, Osborn, Scottish Indemnity, London.  
 Leaver, Harry Reginald, State, Liverpool.  
 Lynch, John Paget, Liverpool and London and Globe, Liverpool.

Macfarlane, Douglas, London and Lancashire Fire, Liverpool.  
 Maddock, John E., Phoenix, London.  
 Mayes, Raphael, Phoenix, London.  
 Munro, Sutherland, Ocean, Birmingham.  
 Murfin, Harry Steel, Alliance, Sheffield.  
 Padgett, William Reginald, Guardian, Leeds.  
 Parker, Hugh Miller, Excess, Glasgow.  
 Plumridge, James S., Car and General, London.  
 Rainbow, Kenneth W., Ecclesiastical, London.  
 Rodger, James, General Accident, Perth.  
 Simonds, William E., Car and General, London.  
 Spater, Ernest George, Sun, London.  
 Spong, Frederick William E., Northern, London.  
 Steer, John Stanley, National General, London.  
 Stone, Alfred John, Commercial Union, Exeter.  
 Tite, John Samuel, Alliance, Birmingham.  
 Tolfree, James William, London and Lancashire Fire, Liverpool.  
 Wareham, Arthur Reginald, Midland and Textile, London.  
 Welch, Josiah William, County, London.  
 Young, Alexander Horne, General Accident, Perth.

**PART I. :—**

Abrey, C. G., London Guarantee and Accident, London.  
 Allsebrook, John E., Law Accident, Sheffield.  
 Ambler, William Noel, Phoenix, London.  
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 Baden, Lionel, Central, London.  
 Bailey, Arthur Brook, Royal Exchange, Birmingham.  
 Barker, Alfred T., London and Lancashire Fire, Liverpool.  
 Batzer, Robert John, Sun, London.  
 Belford, James Charles, Royal, Newcastle-on-Tyne.  
 Bell, George B., London and Lancashire Fire, Newcastle-on-Tyne.  
 Blackstock, William Witt, Insurance Broker, Manchester.  
 Blakeborough, George, Yorkshire, Hull.  
 Bloore, Edward H., Pearl, London.  
 Brause, Alfred, Car and General, London.  
 Bray, Gerald, Alliance, London.  
 Brear, William Rowling, Car and General, Sheffield.  
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 Broad, Frederick S., London and Lancashire Life, London.  
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 Brooking, H. F., Yorkshire Coal Owners, Sheffield.  
 Bryant, Frederick William, Phoenix, London.  
 Butler, H. H., Liverpool and London and Globe, London.  
 Butler, Percy N., Car and General, Leeds.  
 Cadle, Stanley, Car and General, London.  
 Caines, Leslie G. D., Royal, Bristol.  
 Carr, Frederick James, Phoenix, Newcastle-on-Tyne.  
 Cartwright, Frank, Alliance, Manchester.  
 Casewell, Vivian John, Alliance, Shrewsbury.  
 Cawson, Frederick A., British Equitable, Liverpool.  
 Chiplin, William Henry, Ocean, Belfast.  
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 Cockle, Henry M., Sun, Bristol.  
 Collins, George Daniel, Law Union and Rock, Birmingham.  
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 Cottrell, Percy Lovell, Commercial Union, Birmingham.  
 Cox, Lawrence H., Liverpool and London and Globe, Liverpool.  
 Croasdell, William Henry, State, Liverpool.  
 Crompton, William Penn, Jun., Ocean, Birmingham.  
 Cullen, John N., Commercial Union, Manchester.



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 Gandy, R. Clayton, State, Liverpool.  
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 Glass, David, General Accident, Perth.  
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 Goodway, Harold William, Fine Art and General, London.  
 Goodwin, Stanley E., Car and General, London.  
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 Gurney-Smith, Sidney, Guardian, London.  
 Hamilton, A., Royal, Glasgow.  
 Hart, Ernest George, Ocean, London.  
 Hassall, Cyril Sheldon, Midland and Textile, Birmingham.  
 Hawkswell, Ernest G., Yorkshire, Sheffield.  
 Hodge, George, Ocean, Hull.  
 Hodge, William, General Accident, Perth.  
 Hollingsworth, Edmund, Guardian, London.  
 Hood, John, Law Accident, London.  
 Horner, A. Lawrence, Royal, Sheffield.  
 Howard, Wilfred, Midland and Textile, London.  
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 Jackson, Frederick H., Royal, Hanley.  
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 Leighton, T. R., Ocean, Hull.  
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 Lindsey, Wilfred H., Ocean, London.  
 Lister, Edward J. S., Essex and Suffolk, London.  
 Love, Herbert Nisbet, Alliance, London.  
 Lowther, George Nicholas, Ocean, Brighton.  
 Luff, Edgar William Guy, Union, London.  
 Luscombe, Valentine C., Central, London.  
 M'Clure, Joseph, Commercial Union, Belfast.  
 Macdonald, Donald William, Ocean, Leicester.  
 M'Donald, Francis V. T., Ocean, Belfast.  
 MacDonald, Ronald, Ocean, London.  
 M'Farlane, Joseph Y., Commercial Union, Belfast.  
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Owen, Trevor Lloyd, Alliance, Shrewsbury.  
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Palmer, Walter William; Sun, London.  
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Rayner, Cyril Hood, Alliance, London.  
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Rule, Herbert G., General Accident, Sheffield.  
Senior, Robert M., Commercial Union, Manchester.  
Sharp, John George, General Accident, Perth.  
Sheaves, Harold E., Railway Passengers', London.  
Small, Thomas, British Crown, Glasgow.  
Smith, Charles William, Royal, Manchester.  
Smith, Frank R., Phoenix, London.  
Smith, George Frederic, Royal, Hanley.  
Smith, Harry, Sun, London.  
Smith, John W., Midland and Textile, Birmingham.  
Smith, Norman T., Employers' Liability, Cardiff.  
Smith, P. N., Gresham, Manchester.  
Smith, Robert R., Yorkshire, Sheffield.  
Smith, Sydney Wilson, Atlas, Manchester.  
Smith, William Hollings, Atlas, Leeds.  
Stansfield, Frederick William, Law Accident, Liverpool.  
Stewart, G. H., Car and General, Dundee.  
Stewart, Charles C., General Accident, Perth.  
Taylor, Hugh Stowell, Ocean, Belfast.  
Theobald, Miss Hilda M., Ocean, Brighton.  
Thomas, John, Jun., Ocean, Newcastle-on-Tyne.  
Thomas, W. E., Royal, Dublin.  
Tolton, Archibald G., Fine Art and General, Leicester.  
Travis, William Frank, Ocean, Sheffield.  
Walker, Heber Ernest, London and Lancashire Fire, Liverpool.  
Walker, Vernon D., General Accident, Dundee.  
Walthew, Fred, Commercial Union, Manchester.  
Watson, Frank B., Scottish Union and National, Dublin.  
Weeks, A. J., General Accident, Bristol.  
Wilkinson, Ernest M., Alliance, Dublin.  
Wilson, Thomas H., London Assurance, Belfast.  
Wright, Solomon, Commercial Union, Birmingham.  
Yates, Thomas, Commercial Union, Manchester.



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